



Go Power

Pioneering India's Energy
Sovereignty Through Next-Gen
Energy Storage - MegaCell





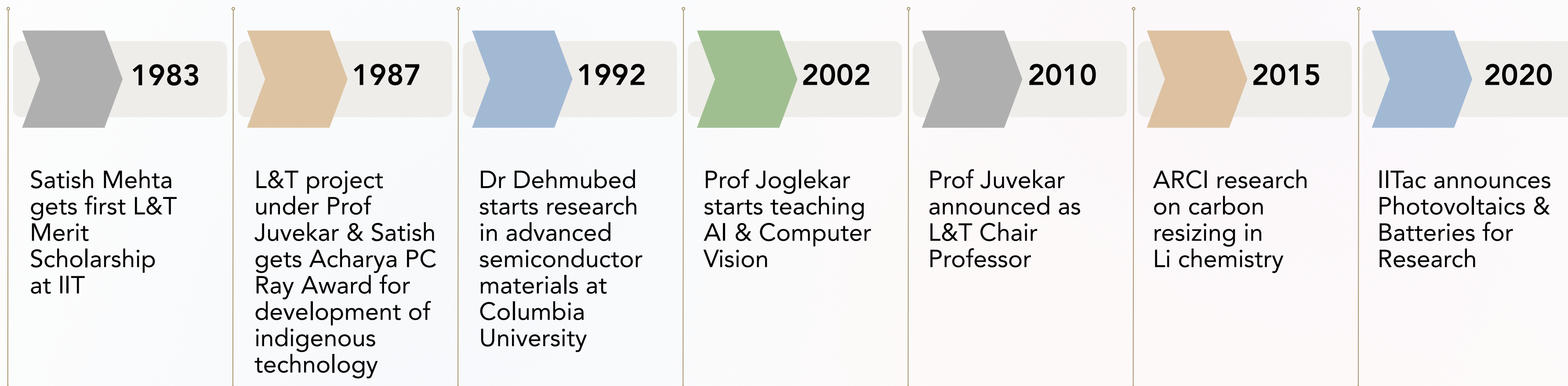
The World's Energy Transition Hinges primarily on Storage

India needs indigenous, scalable, future-ready storage.
That's what we're building.



Technological Momentum for a National Mission.

Rome cannot be built in a day.
A 50-year journey built on 40+ years of lab research.



2025

Go Power Technologies incorporated in India, Go Anytime in UK and Go Goa in Goa, India

2025-32

Global leadership target - AI derived novel materials

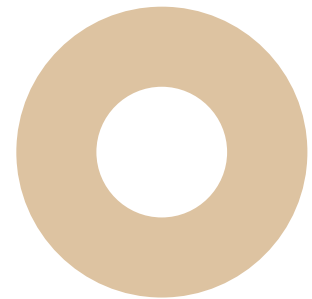
Yet behind every energy revolution lies a materials bottleneck."

(And that's exactly where our story begins.)

Finally that is why this is Deeptech.

And that is where the comparative advantage emanates from.





Material science
developments are slow
and can take decades.

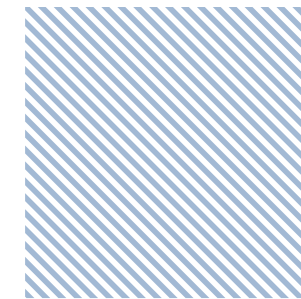
Conventional Battery Chemistry Is a Dead End



Current storage system technologies are based on imported and expensive supply-constrained raw materials like lithium, cobalt and nickel.



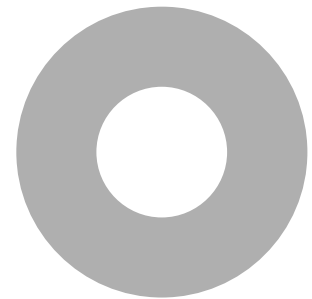
New battery chemistries are dependent on material science innovations. With natural materials and legacy approaches - this will take decades. If at all !!!



Energy storage systems are spiralling towards being the first trillion dollar pa product market in history - driven by the reality of "close to free" solar energy.



The race is on.
The only way to win is through AI



Our Five-year ask

A 10 MWh outdoor air cooled autonomous storage system in a standard stackable shipping container capable of being deployed in a desert or electric substation at Rs 2.5 crores.



System-level intelligence & smart grid protocols



An overall storage system which autonomously controls the smart grid operations as per agreed upon protocols.



And then expand functionality of the grid by wirelessly extending it to electric vehicles through reversible chargers and rooftop generators.

Introducing **MEGACELL**

The Building Block of India's
Storage Future

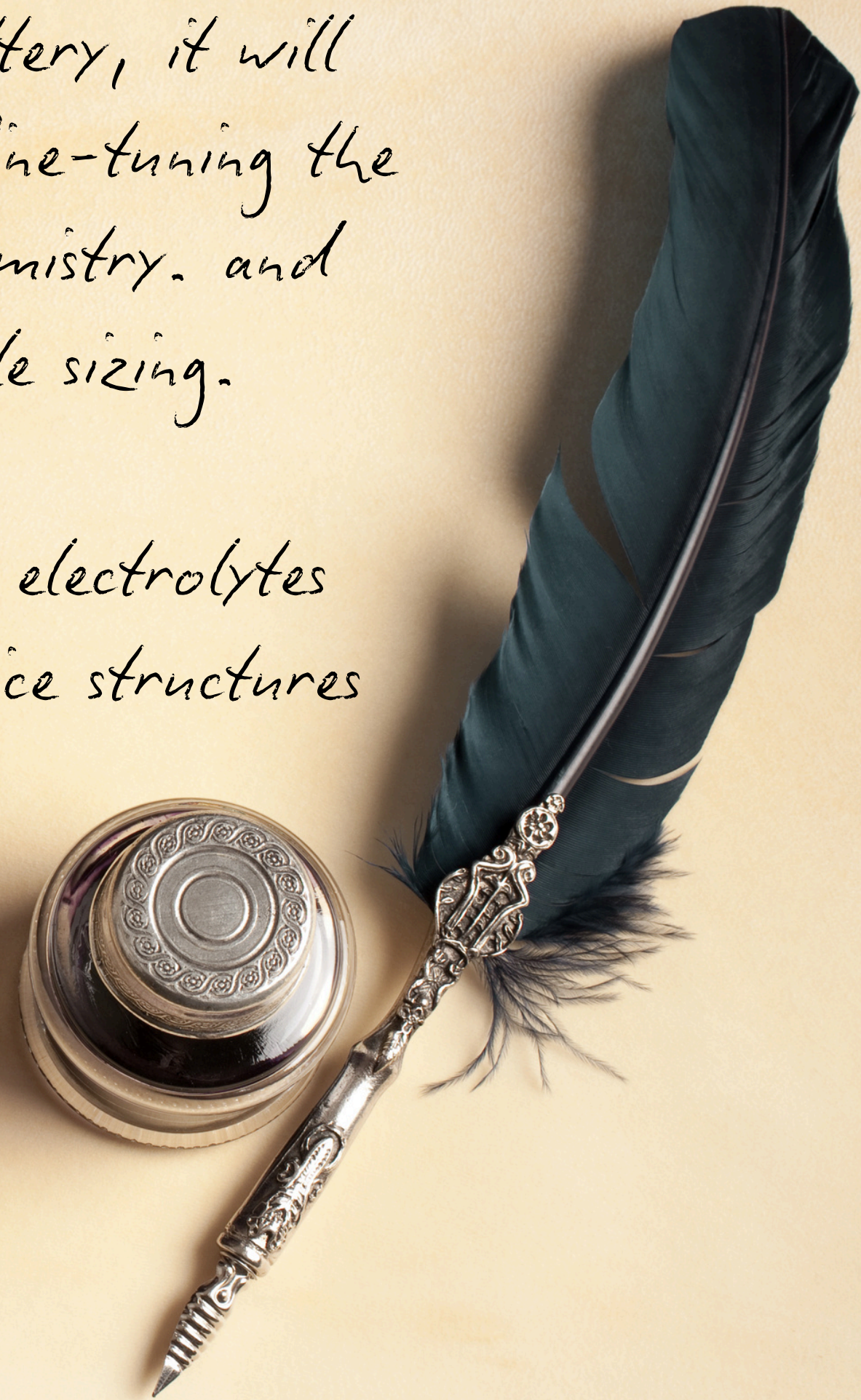
0.25 kWh per cell | Air-cooled | Stackable |
Modular | India-engineered



If you read Prof Juvekar's research paper on the ARCI Battery, it will highlight the depth of work and expertise that went into fine-tuning the Li ion chemistry. Finally there was a core material and chemistry. and then it was fine tuning in a lab. In this case, carbon particle sizing.

Now we need a tunable battery. Same electrode, different electrolytes for different functionalities. Same electrode, different lattice structures again for different functionalities. But you can have a thousand mfg plants. So the same plant has to make all versions. This was the AI Ask

Satish Mehta,
Board Observer, IIT Alumni Council

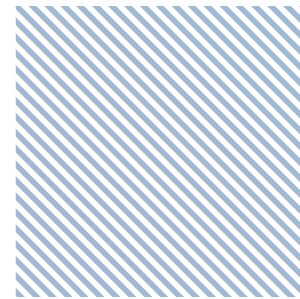


Why MegaCell?

Base module for assembly of complete systems for smart grid applications & EVs



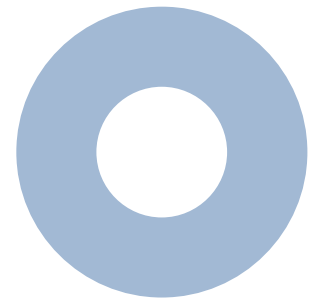
Current batteries were not invented for electric vehicles. Lithium based systems came from mobile phones and laptops.



Small AAA sized cells are multiplexed by the thousands to create the battery packs that power electric vehicles.



The MegaCell with integrated electronics has Mega sized cells with each cell (4 inch cube) eventually holding 0.25 KWH.



3 Legs of MegaCell

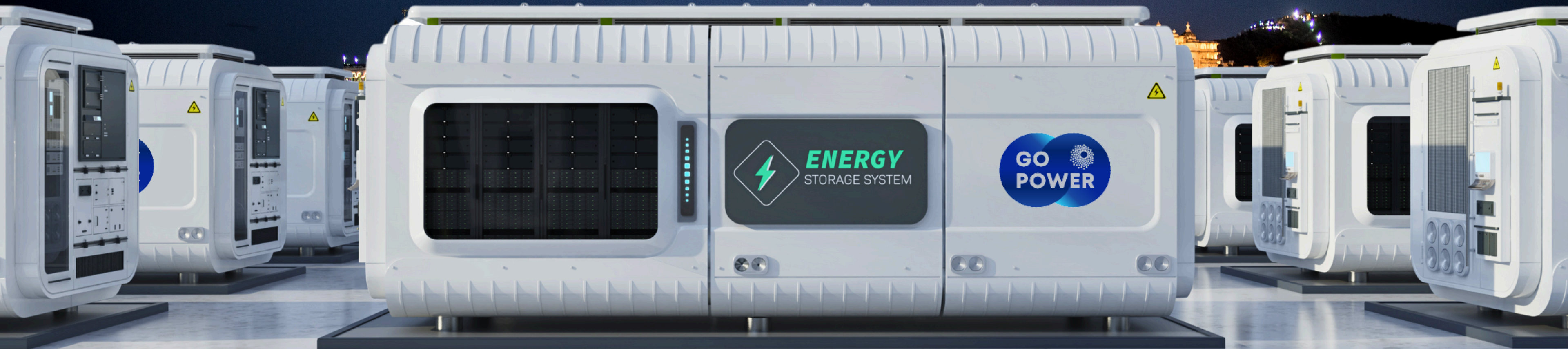
What Makes MegaCell Unbeatable
— the Strategic Triad

MEGACELL

AFFORDABLE

SCALABLE

DIFFICULT
TO REPLICATE



1 Affordable

Lower Total Cost

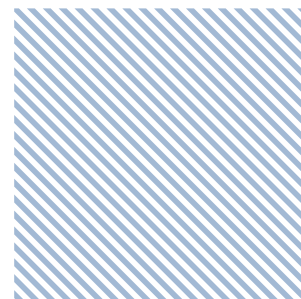
On commercial launch:

USD 30 per KWH capital cost of megacell | 98% round-trip efficiency

3x cycle life of LFP | Air-cooled even in a desert | Upto 50C charging



Lower the capital cost, longer the cycle life, faster the charging, better the round trip efficiency - lower the total cost (LCOE)



Current battery systems offer ~92% round-trip efficiency, require cooling, last 3–5 years with fast charging, with a capital cost of \$100/kWh.



MegaCell aspires a 10x improvement in price performance over existing options.

2 Scalable

Within 3 years of Launch:

USD 15 per KWH | 99% round-trip efficiency

10x cycle life of LFP | Air-cooled even in a desert | Upto 100C charging



The price performance of purely chemical systems like conventional batteries does not go down in future depending on improvements in manufacturing process.



By using a synthetic bespoke material and extensive AI control based on specialised micro-electronics, it is possible to continuously improve price performance.

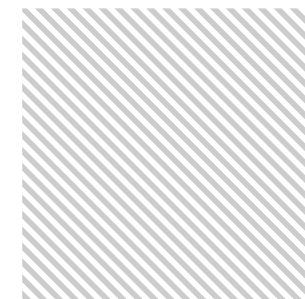
3 Moat Around Castle

» Difficult to Replicate

As the MegaCell product range is still to be patented, it is not possible to reveal precise technical details.



The need for secrecy is only till the manufacturing equipment has been perfected.



Thereafter, without access to the equipment and operating software, it would be extremely difficult to replicate the functionality.



Containerised Deployment

Artistic representation of the MegaBattery — a grid-optimised energy system built from MegaCells. Housed in a 7-metre bus-sized body, the MegaBattery is modular, mobile, and wheel-mountable. Constructed using ultra-light corrugated stainless steel and aluminium, each system can deliver upto 2.5 MWh of high-efficiency storage.

Technology of **MEGACELL**

The Building Block of India's
Storage Future

Programmable chemistry | Electrolyte-tunable
performance | AI-enhanced design

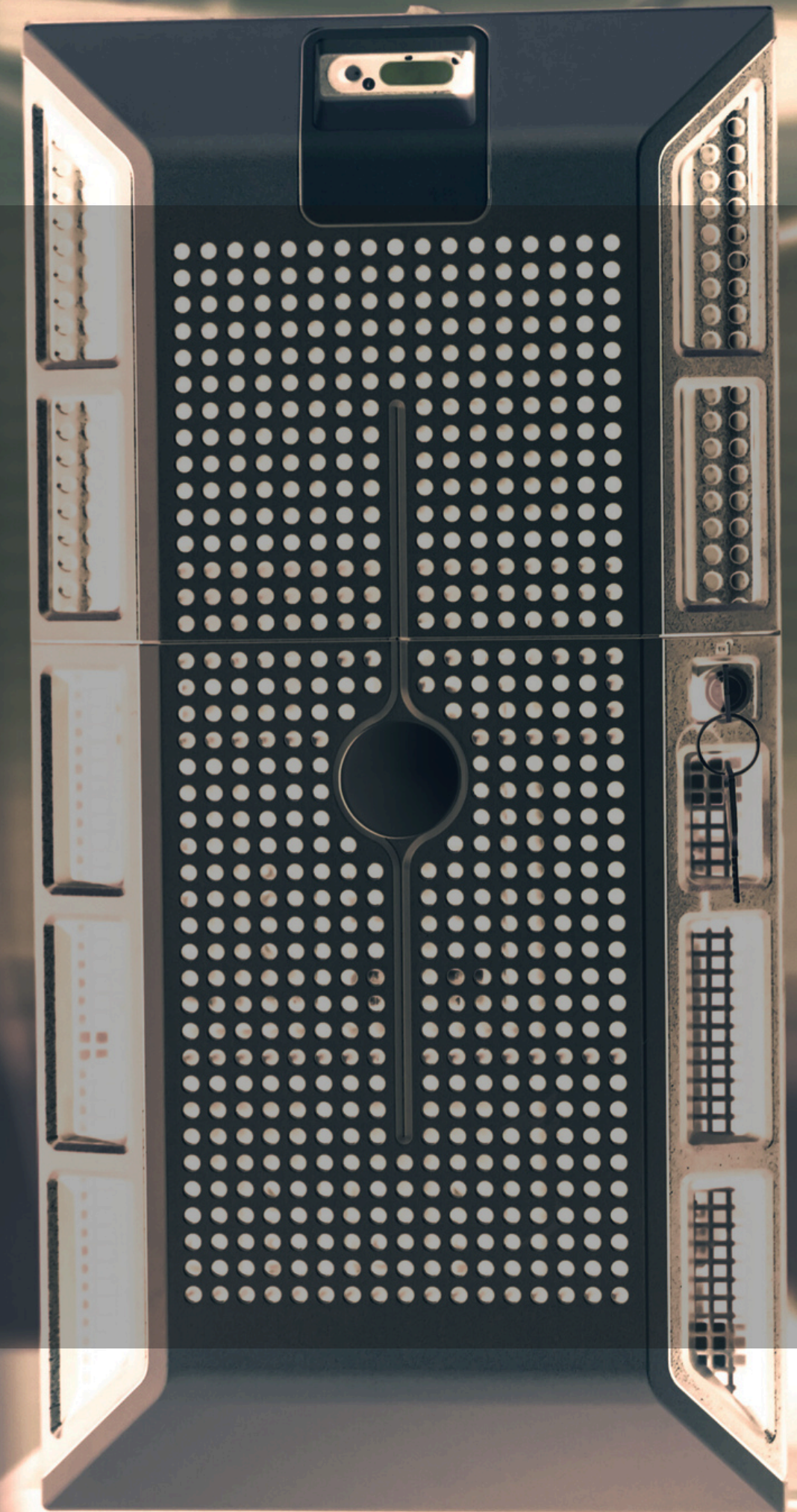


AI-designed storage block

Reimagining Energy Storage at the Molecular Level

We've applied data intelligence and proven chemical engineering methods to rearchitect energy storage by:

- Using a bespoke material base
- Modeling properties via AI-trained simulation
- Customising structure and performance by application use-case

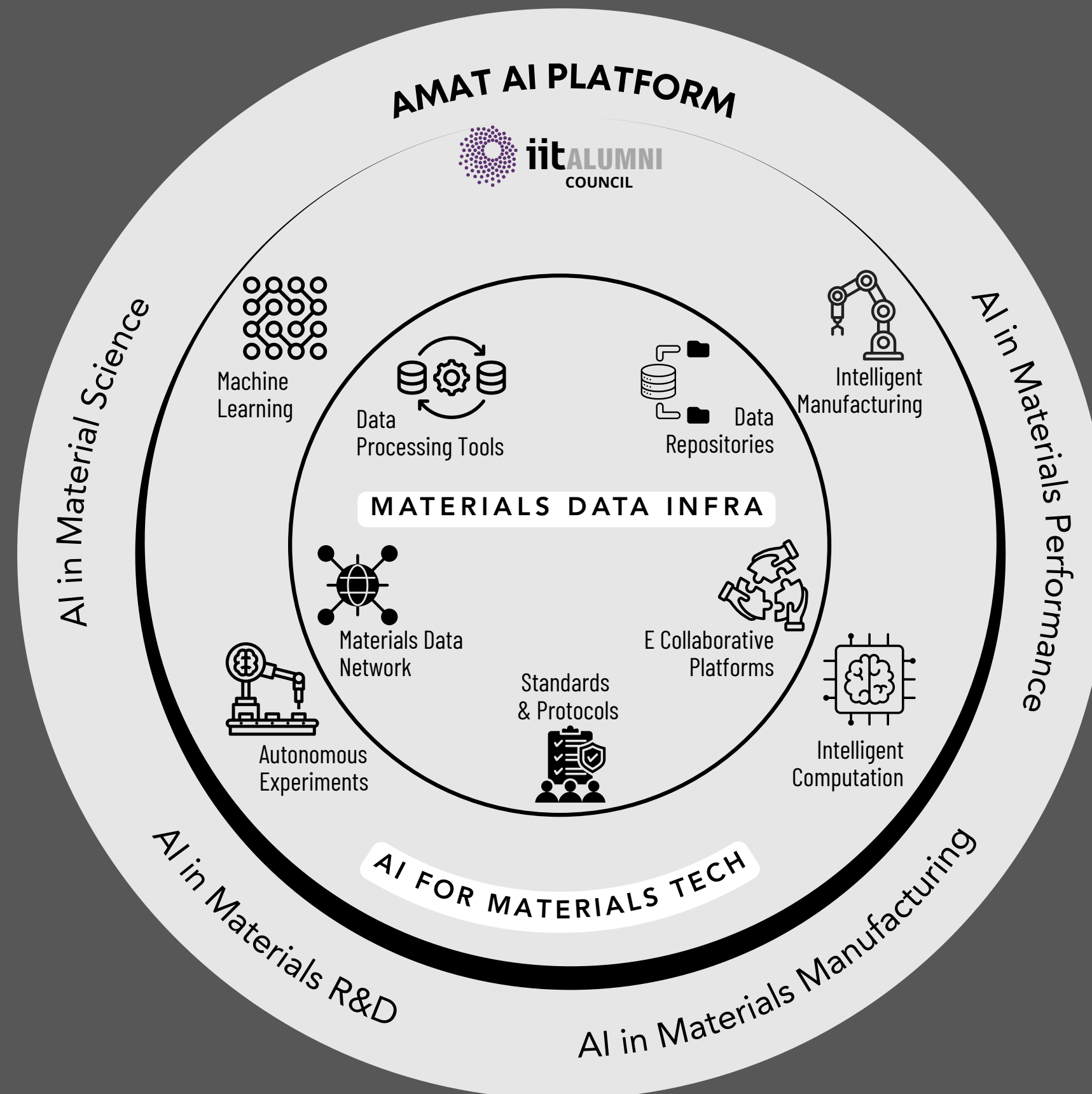


AMAT AI Platform*

The Brain Behind Future Materials Evolution

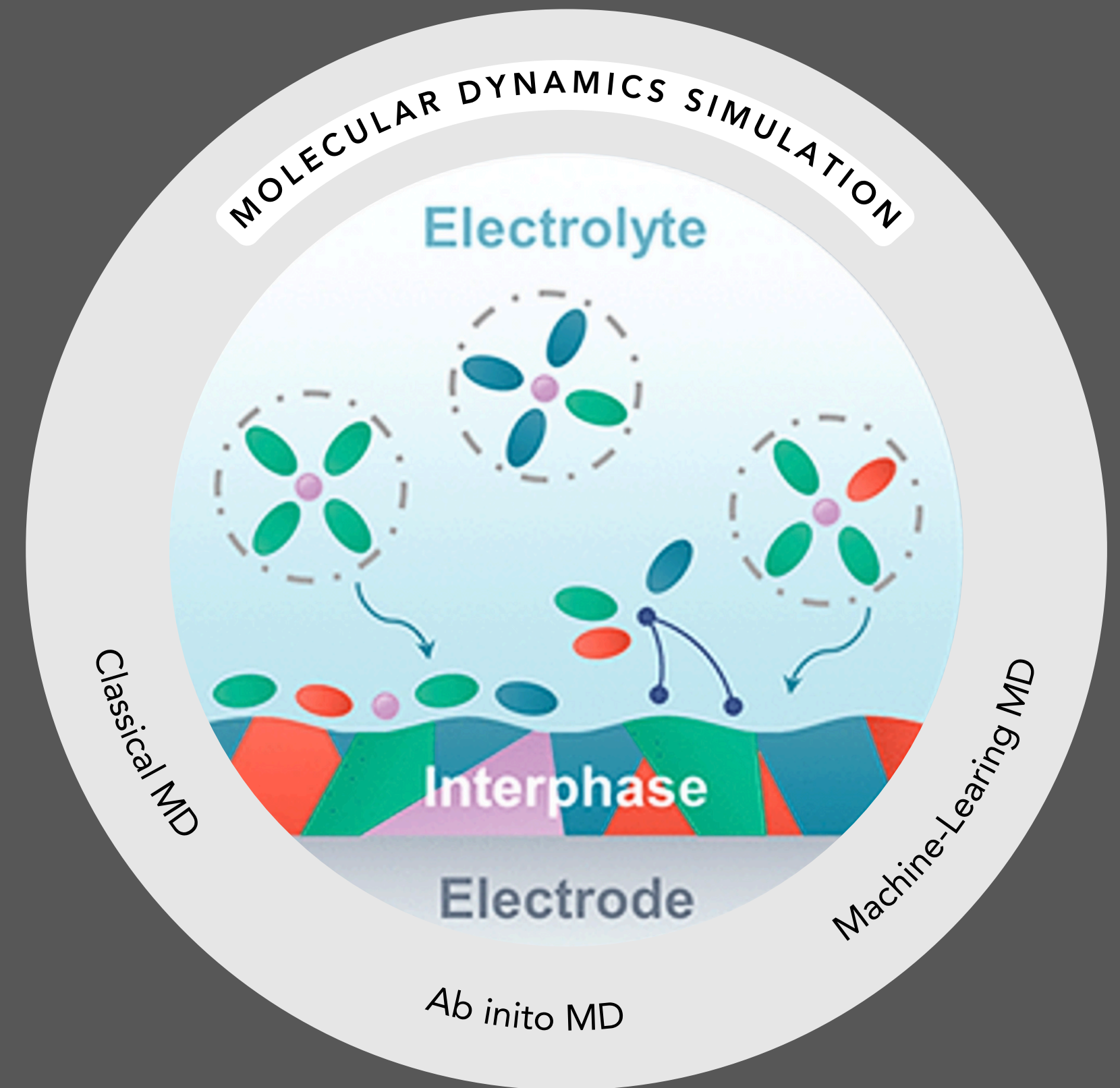
Integrating data, simulation, and machine learning to accelerate performance-aware material design.

***An IIT Alumni Council supported initiative.**



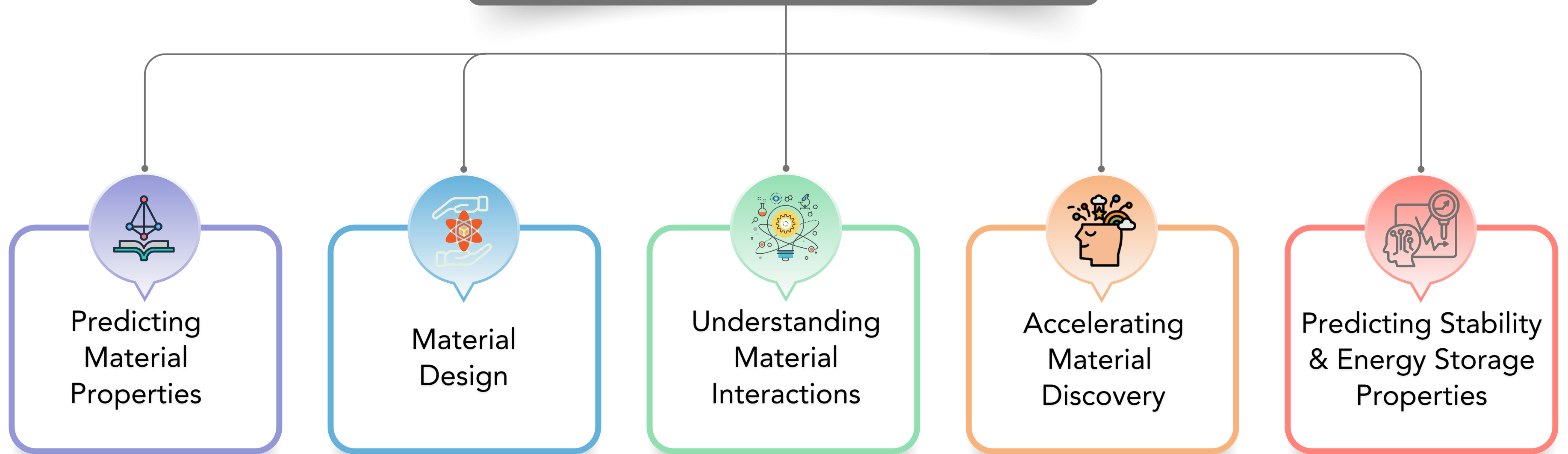
Where Chemistry Meets Computation

Simulating atomic-scale interactions across electrolyte, interphase, and electrode layers.



Ref: Farman, MdKhaja, et al. "AI-Enhanced Battery Management Systems for Electric Vehicles: Advancing Safety, Performance, and Longevity." E3S Web of Conferences. Vol. 591. EDP Sciences, 2024.

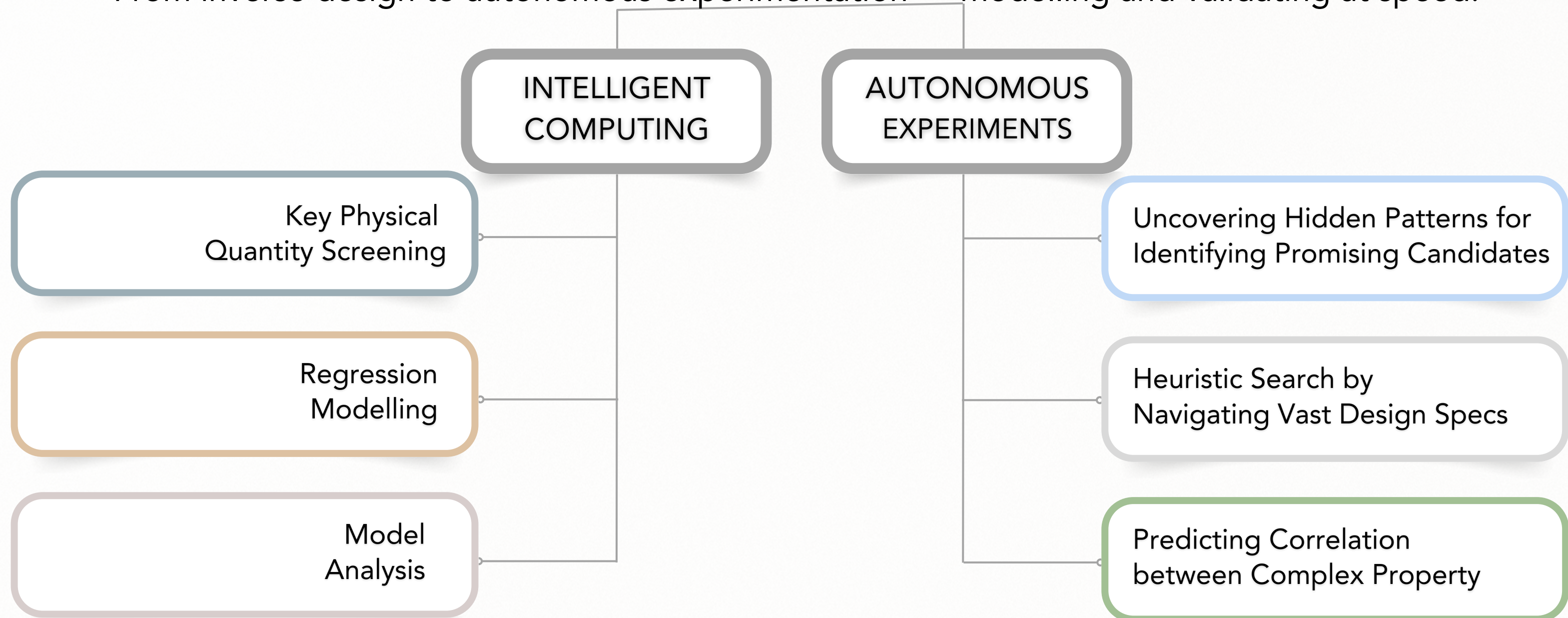
COMBINATION OF AI & DENSITY FUNCTIONAL THEORY / DFT



Creating a closed-loop system for predicting, designing, and optimising next-gen energy materials.

AI-DRIVEN MACHINE LEARNING STRATEGY FOR MATERIAL EVOLUTION

From inverse design to autonomous experimentation — modelling and validating at speed.



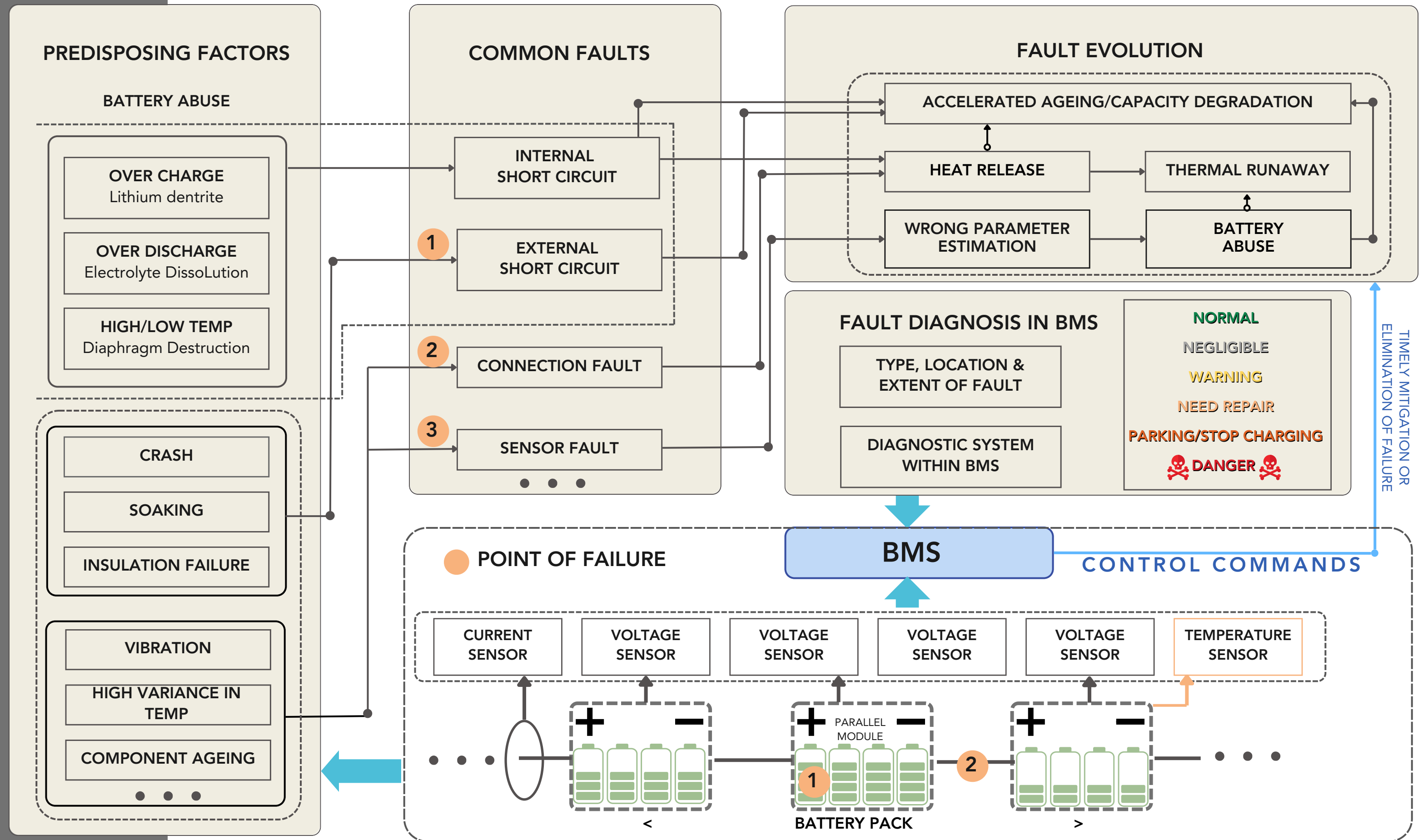
Fault Diagnostic Architecture

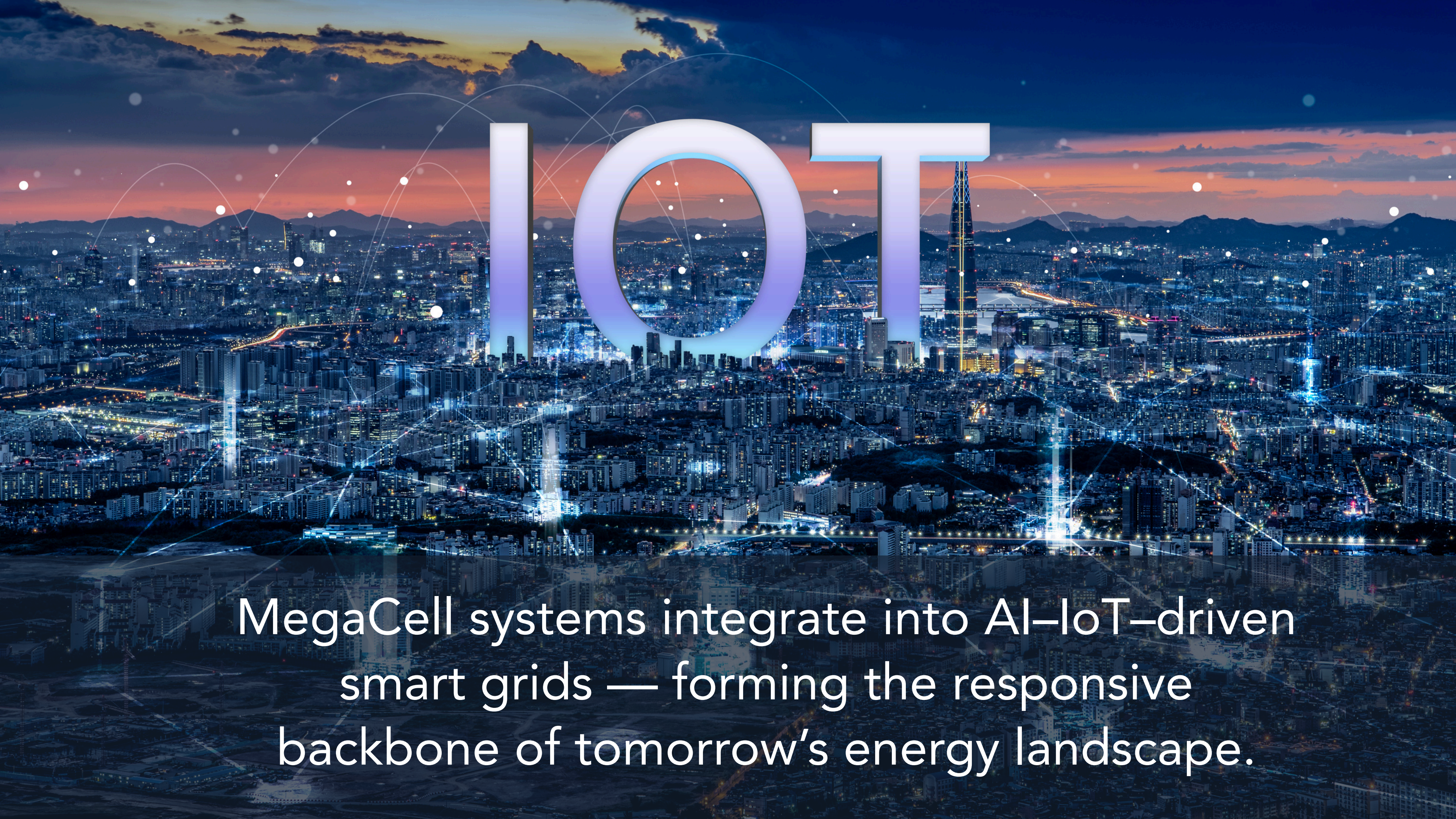
AI-Powered Fault Diagnostics for Smart Storage Systems.

From cell-level degradation to system-level response — enabled by BMS and predictive analytics.



FAULT DIAGNOSTIC ARCHITECTURE



A night cityscape with a glowing IoT logo and a network overlay. The logo is large and white with a blue glow, set against a backdrop of a city at night with lights and a network of glowing lines and dots. The city is densely packed with buildings, and the sky is dark with some clouds. The overall theme is smart cities and IoT technology.

IoT

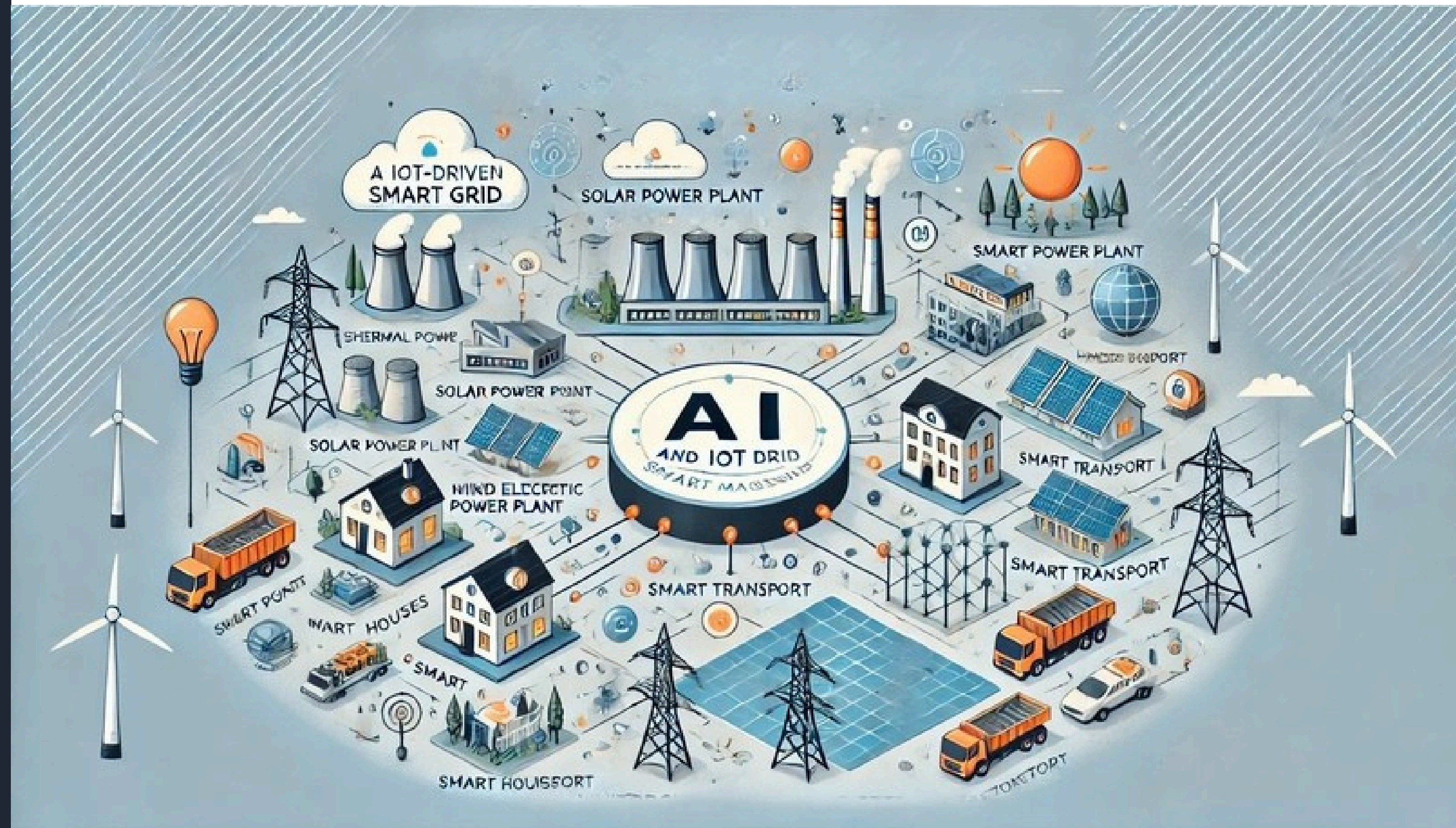
MegaCell systems integrate into AI-IoT-driven smart grids — forming the responsive backbone of tomorrow's energy landscape.

AI & IOT-DRIVEN SMART GRID

for smart energy
management

MEGACELL IN THE SMART GRID

AI-governed
dispatch, predictive
load shifting, secure
storage orchestration



The R&D Journey

MEGACELL

The Building Block of India's
Storage Future

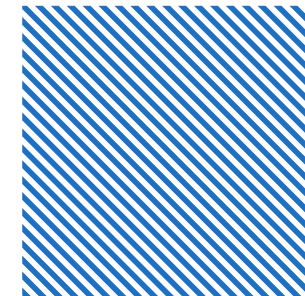
From Bench to Busbar



Laboratory research spanning 40 years forms the foundation for this project.



Storage system performance is driven by a few parameters - conduction from the electrodes, rate of movement of ions in the electrolyte, surface area etc.



The three primary characteristics are charging rate, quantum of charge stored/generated and cycle life.

It began quietly — in a lab corner where carbon particles were studied not just as materials, but as enablers of memory, conductivity, and precision. It started with optimising the conducting particles of carbon in lithium-ion batteries, originally intended for electric two-wheelers.

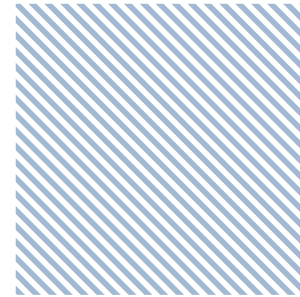
This design lineage became part of India's early EV ecosystem — and was further developed for scalable, indigenous cell manufacturing.



The journey started with optimising the conducting particles of carbon in a lithium-ion battery used in two-wheelers.



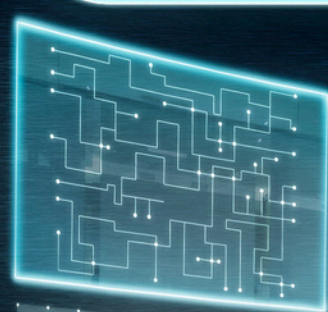
This was a Phd research project and lasted around seven years. The project involved studying the microstructure of the battery electrodes.



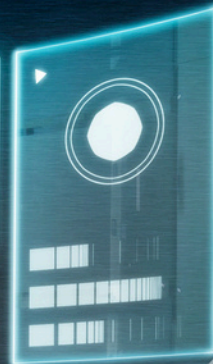
The project was sponsored by the Centre for Automotive Energy Materials through their Centre called ARCI at the IIT Chennai Research Park.



The market-leading two-wheeler Ather was incubated at IIT Chennai Research Park around the same time, and built on the broad design developed by ARCI & manufactured by Amara Raja.



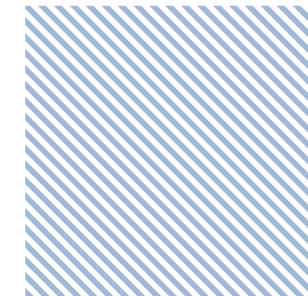
POWER-ON
POWER-OFF
EMAIL
INTERNET
WORLD
NO
SEARCH



India-Built. ARCI-Tested. IIT-Led.



Batteries with higher electrode surface areas can support higher charging rates. Higher surface area can also increase specific capacity by allowing more active material to participate.

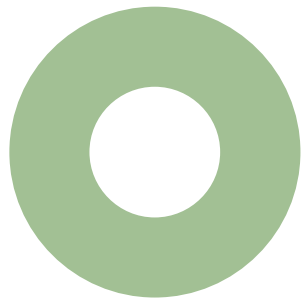


Magnetic self-assembly of molecular-scale materials to create 3D assemblies holds the potential of redefining material lattices that appear in nature.
It is to materials, what genetically modified foods are to agriculture.



From Lab to Literature: Material Science Milestones

The foundational research driving India's indigenous cell innovation.



The research backbone behind MegaCell — spanning electrode architecture, microstructure tuning, bespoke electrolyte and AI-driven material optimisation.

Comprehensive effort on electrode slurry preparation for better electrochemical performance of LiFePO₄ battery

Kumari Konda^{a,b}, Sahana B. Moodakare^{a,*}, P. Logesh Kumar^c, Manjusha Battabyal^a, Jyoti R. Seth^b, Vinay A. Juvekar^b, Raghavan Gopalan^a

^a Centre for Automotive Energy Materials, International Advanced Research Centre for Powder Metallurgy and New Materials, IITM Research Park, Kanagam, Taramani, Chennai, 600113, India

^b Department of Chemical Engineering, Indian Institute of Technology Bombay, Powai, Mumbai, 400076, India

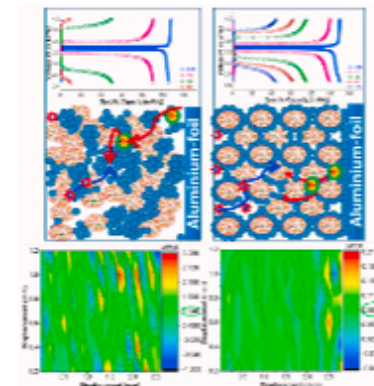
^c Department of Chemical Engineering, Indian Institute of Technology Madras, Chennai, 600036, India



HIGHLIGHTS

- Pre-mixing of carbon black-LiFePO₄ for electrode's desired microstructure.
- A novel "linearly resolved electrical resistivity measurement" technique.
- The homogeneity of the slurry is measured using rheological properties.
- Effective transfer of LFP properties to the electrode performance.

GRAPHICAL ABSTRACT



ARTICLE INFO

Keywords:

Lithium ion battery
Slurry preparation
Dry ball-milling
Rheology
Electrochemical performance
Linearly resolved electrical resistivity measurement

ABSTRACT

For a given proportion of active material, conductive agent, and binder, performance of the lithium ion battery depends on microstructure of the electrode. Uniform distribution of de-agglomerated particles of carbon black on the active material in the slurry is crucial for establishing a conductive network around the active particles and for improving the adhesion of the electrode to the current collector. Herein, we demonstrate that pre-mixing of carbon black and LiFePO₄ via dry ball-milling achieves the desired microstructure in the electrode coating. Homogeneity of slurry of LiFePO₄ in Poly(vinylidene fluoride)/N-methyl -2-pyrrolidone is demonstrated using measurement of viscosity and dynamic light scattering. Dried electrodes are shown to be uniform via SEM imaging and by a novel "linearly resolved electrical resistivity measurement" technique. Through peel tests it is shown that adhesion of the electrode to the current collector is improved. These improvements reflect in the electrochemical characteristics of the electrode such as increased cycling stability, higher exchange current density and ability of the electrode to perform at a higher C-rate. The electrodes prepared with this method, at an optimal composition, give a higher discharge voltage of ~3 V at 10 C compared to values of 2.4–2.8 V reported for unmodified LiFePO₄ so far.

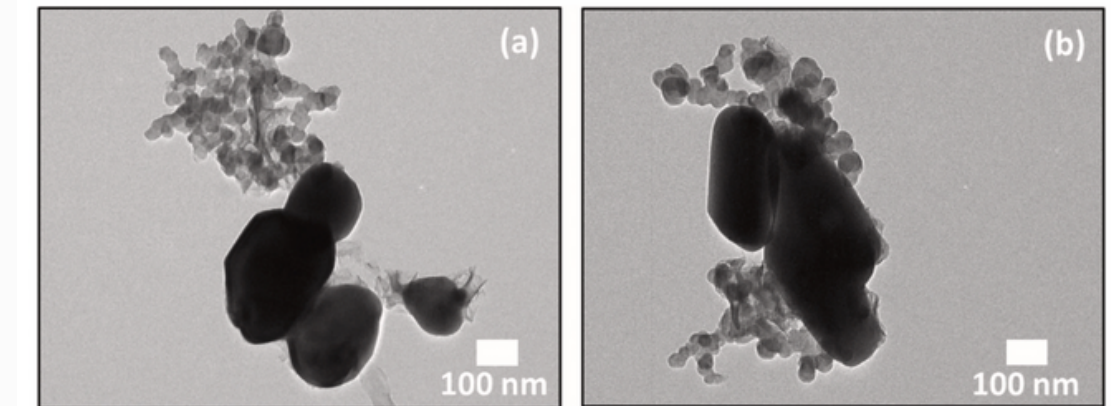
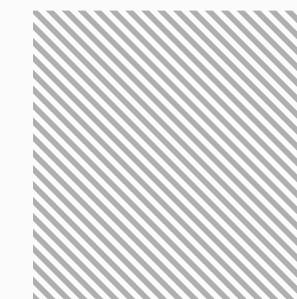


Fig. 4. TEM images of particles scraped from (a) WBM and (b) BM electrodes.



As part of the PhD project, the physical parameters of the carbon particles were altered extensively so as to achieve a 20% improvement in performance of the battery..

Reduction Self-Assembly of Three-Dimensional Graphene Hydrogels: Implication as Adsorbents

Manimegalai Ganesan* and Vinay A. Juvekar



Cite This: <https://dx.doi.org/10.1021/acsanm.0c02108>



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Supporting Information

ABSTRACT: We have prepared a three-dimensional (3D) graphene hydrogel with a specific surface area that is comparable to the theoretical specific surface area of two-dimensional graphene. Graphene oxide was reduced in a glass vial using aqueous sodium bisulfite in the presence of ammonia, which regulates the rate of reduction. The kinetics of reduction was monitored by the rate of consumption of sodium bisulfite, whereas the extent of self-assembly of the reduced graphene sheets was captured through reduction in the volume of the 3D graphene with time. Dynamics of self-assembly shows two distinct regimes, namely, induction and shrinkage. During the induction period, no noticeable shrinkage in the volume occurs, although there is a significant reduction of graphene oxide. During the shrinkage period, the volume shrinks continuously with time until it reaches a constant value. The onset of shrinkage requires a critical extent of reduction of graphene oxide. We hypothesize that during the induction period, the overlapping portions of the sheets undergo lateral stacking and the reduced graphene oxide sheets undergo enlargement. With the increase in ammonia concentration, the rate of reduction is lower, the induction period is longer, and the extent of reduction at the onset of shrinkage is greater. This causes progressively greater enlargement of sheets as observed from the scanning electron micrographs of the lyophilized 3D aerogel. On further reduction, the larger sheets shrink slowly and to a lesser extent. The extent of stacking of larger sheets is also reduced significantly as seen from X-ray diffraction.

KEYWORDS: 3D graphene, reduction-self-assembly, induction period, shrinkage period, lateral stacking

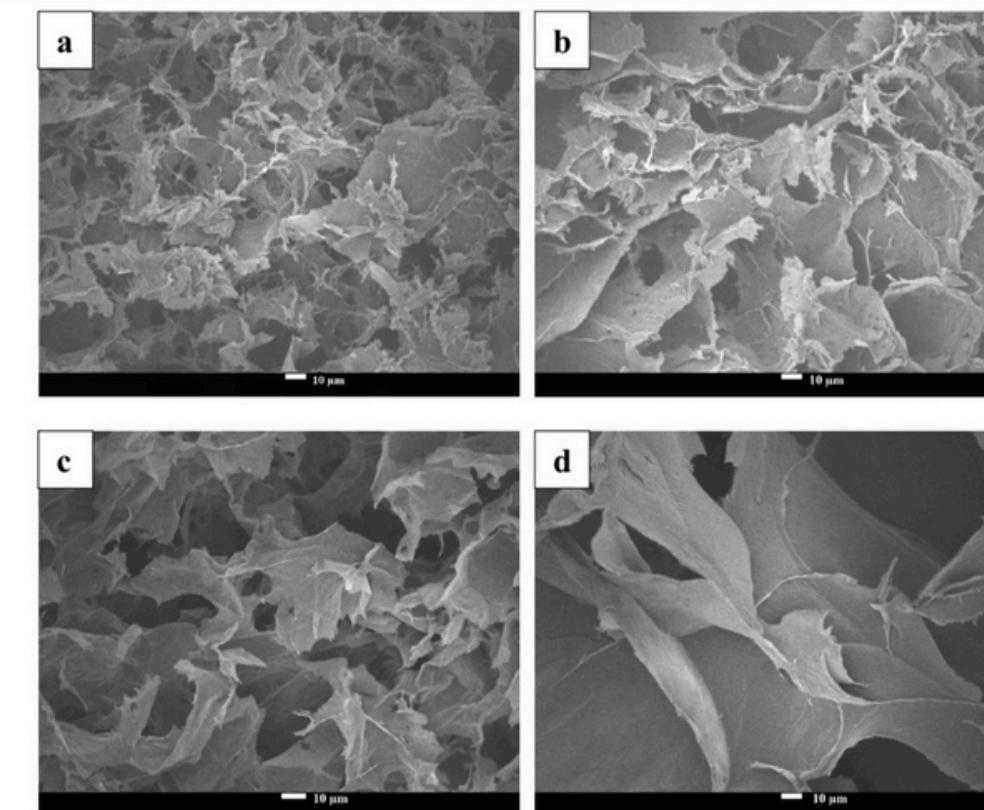
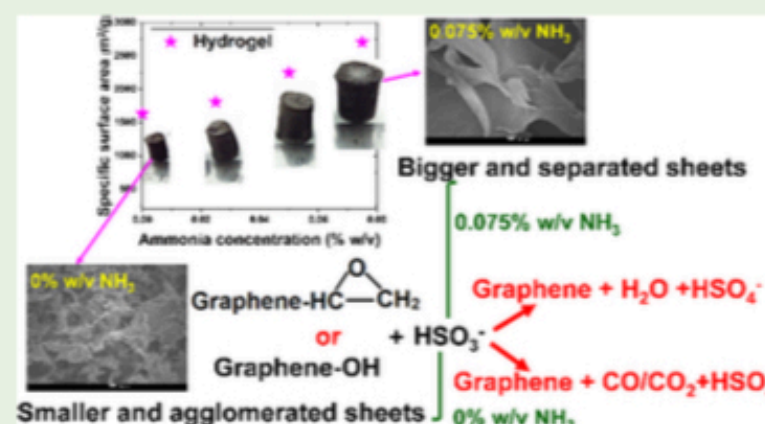


Figure 4. Field emission gun SEM (FEG-SEM) images of a three-dimensional graphene aerogel (scale bar: 10 μm): (a) Without ammonia (500 $\times$), (b) 0.025% w/v NH_3 (500 $\times$), (c) 0.05% w/v NH_3 (600 $\times$), and (d) 0.075% w/v NH_3 (500 $\times$).



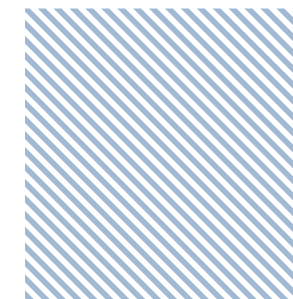
As part of the PhD project, a surface area of around 2800 sqm per gram was achieved.

Three dimensional Holey Graphene Electrodes

Vinay Juvekar and Per Löthman

Three dimensional (3D) graphene has properties such as high electrical conductivity, high surface area, and high electrical capacitance, which make them attractive as electrodes for electrochemical cells, capacitive deionizers and electrochemical supercapacitors. However, since graphene sheets act as ion-filters, they hinder diffusion of ions across them. This lacuna limits the thickness of 3D graphene electrodes, thereby reducing their cost effectiveness. By introducing nanometric size holes in the graphene sheets, it is possible to make the electrodes both thick and with high efficiency for ion transport. Important factors determining the efficiency is size and areal density of holes, and arrangement of holes on sheets. The optimal size and arrangement of holes provide ionic flow paths which produce uniform distribution of ions within the electrode without hindering their transport. In this talk, we discuss various aspects associated with preparation and optimization of 3D holey graphene electrodes.

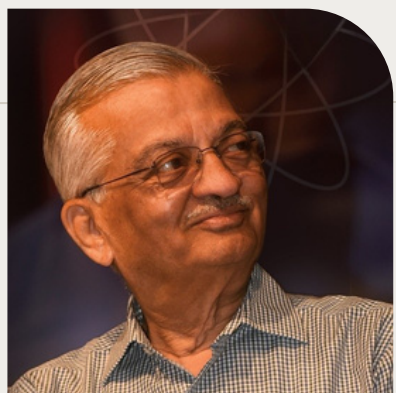
Per Arvid Löthman, PhD received their education beginning in 1990, when they completed an MSc. in Materials Science&Engineering from FAU Erlangen-Nürnberg. Per Arvid then went on to participate in a study abroad program from 1995-1996 at Alfred University, where they studied Ceramic Engineering, Glass Science, and Ceramic Science. Finally, in 2014 they completed their Ph.D. in Macroscopic Magnetic Self-assembly from the University of Twente.



Assembly of molecular scale materials by magnetic self assembly opens up completely new vistas for fabrication of AI designed materials

ARCI

Dr. Anil Kakodkar is the Chairman of ARCI. He is a Padma Vibhushan awardee, former Chairman of the Atomic Energy Commission of India, and was Director of Bhabha Atomic Research Centre (BARC), Trombay (1996–2000). He was also Chairman of the Board of Governors of IIT Bombay.



Prof Joglekar at her convocation with Dr Anil Kakodkar



Core Thought

“R&D labs like ARCI should look beyond lithium-ion battery technology and develop technologies involving other alternative energy materials.”

Dr. G. Sundararajan
Former Director, ARCI



Multiple Echoes

“Cost of electrode materials contributes significantly to the overall cost of LiBs. As India is heavily dependent on imports, it has become essential to indigenously develop a technology and support industrial organisations in LIB technology.”

Dr. Tata Narasinga Rao
Director, ARCI



Satish Mehta worked with Merlin Gerin and Tata Rao to help conceptualise a smart grid for Andhra Pradesh in 1989. It became the first grid to replace meters with flat rate MCB connections



ARCI

"If you read Prof Juvekar's research paper on the ARCI battery, it will highlight the depth of work and expertise that went into fine tuning that chemistry. This learning and related data has been used to create the core material which has then been suitably upgraded by ai to create a range of novel materials which can be manufactured in the same plant with the same raw material - but whose functionality can be tweaked as required and then altered even more by customising the electrolyte."

According to Satish Mehta, Board Observer deputed by IIT alumni council for the Go Power project



Satish Mehta
Board Observer
IITAC for GO Power

ARCI signs agreement to support Indigenisation of Lithium-Ion Battery Technology fabrication

A fabrication lab for Li-ion batteries will soon be set up in Bangalore in an attempt to boost up-scaling and commercialisation of the technology.

International Advanced Research Centre for Powder Metallurgy and New Materials (ARCI), an Autonomous R&D Centre of Department of Science and Technology (DST), Govt. of India and Nsure Reliable Power Solutions., Bengaluru signed an agreement for technical know-how transfer and training of personnel to set up the Li-ion battery fabrication lab on November 25, 2021.

The transfer of know-how will be based on the expertise developed in establishing Li-ion battery process and its successful demonstration in electric scooters and solar street lamps by the Centre for Automotive Energy Materials, ARCI under the Technical Research Centre on Alternative Energy Materials and Systems, in line with the ‘Atmanirbhar Bharat Abhiyan’ or ‘Self-Reliant India Mission’.

Dr. Anil Kakodkar, Chairman, Governing Council, ARCI, said that the partnership between ARCI and Nsure Reliable Power Solutions is an important milestone to address challenges associated with climate change and carbon footprints. He emphasised the need of indigenous technology development for sustenance and highlighted the importance of partnership between R&D labs and Industries to take technologies to higher TRLs. He also stressed upon the need for competent human resources, multiple formats to leverage complementary resources of stakeholders in innovation ecosystem and government support for technology upscaling and commercialisation. He said that ARCI-Nsure agreement can be a role model for how such an ecosystem can evolve in the country.

“R&D labs like ARCI should look beyond lithium-ion battery technology and develop technologies involving other alternative energy materials,” Dr. G. Sundararajan, former Director ARCI, emphasised.

“Cost of electrode materials contributes significantly towards the overall cost of LiBs, and as India is heavily dependent on import of these materials, it has become essential to indigenously develop a technology and support industrial organisations in LIB technology,” Dr. Tata Narasinga Rao, Director, ARCI pointed out.

Dr. R. Gopalan, Regional Director, ARCI-Chennai., briefed about the efforts of DST and ARCI in setting up technical research centre on alternative energy materials and systems, especially the Li-ion battery technology for electric vehicles and energy storage solutions and said that this technical know-how transfer is a major milestone at ARCI towards “Atma Nirbhar Bharat Abhiyan”.

Dr. R. Prakash, Head, Centre for Automotive Energy Materials, gave an overview of the Lithium-ion battery technology and work accomplished by ARCI at its Chennai Centre.

Dr. John Albert, CTO of Nsure Reliable Power Solutions, highlighted the need of industry-academia relations for bridging the wide gap between the international and Indian scenario in the Li-ion cell manufacturing technology and said that in this context, ARCI-Nsure partnership shall play a crucial role.

Dr. S.K. Varshney and Dr. R.K. Joshi from DST, Dr. Sanjay Bhardwaj, Head, Technology Transfer, ARCI, and Mr. Chandrakanth and Mr. Suryakanth, Directors, Mr. Ramachandra, Business advisor Nsure Reliable Power Solutions participated in the programme.

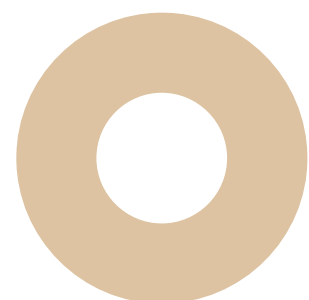


The Roadmap of **MEGACELL**

From Research Breakthrough to
Scalable Sovereignty

Milestones, enablers, and time-bound goals to
bring MegaCell from pilot to national platform





Indicative Timeline & Costs

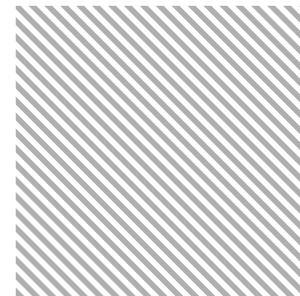
Phase 1: Prototype & Pilot Launch

Phase 2: Manufacturing + Field Testing

Phase 3: National Deployment + Licensing



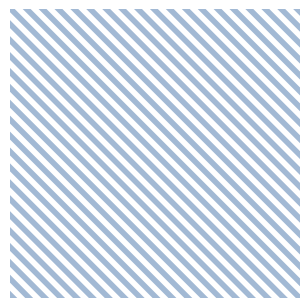
Electrode mfg process & equipment development:
36 months from start of
Noida plant (15.8.25).



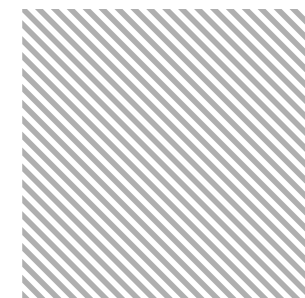
Prototype mfg plant: 60 months
from 1.1.25 with first prototype
based on commercially available
cells purchased from
competitors in June 2026.



Pilot manufacturing line for
marketing test/ trade show units:
24 months from first prototype
(30.6.25).



Grid stabilisation installation for development of software - both internal management of the Battery box and external grid interfacing for duplex grid: 12 months from close of funding round.



Funding requirements: Approx Rs 300 crores for 60 months including pilot line.



Infrastructure requirements: Approx 80,000 sqft industrial unit with around 2,000 sqm open space, a in an urban industrial setting where the grid management and stabilisation system can be tested in live conditions



Lab support: IIT and CSIR campus for various testing and certifications (IITs dont use outside labs or agencies for certifications as they are themselves the last word in the area.

Specialised testing equipment: Approx Rs 8 crores to facilitate faster testing.



Powering India and beyond — over land, water, air, and orbit.
MegaCell



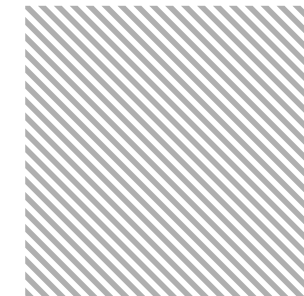
Go Power is...



A novel material development company.
Rooted in 20+ years of IP and research from the
IIT Alumni Council ecosystem.



Based on 25000+ man-years of research by
the IIT and alumni ecosystem in the areas of
transport phenomena, molecular dynamics,
nanotechnology, battery research, bespoke
materials and semiconductor technologies.



This includes 35 years of PhD level research
overseen by Prof Vinay Juvekar - L&T Chair
Professor (2012-15) at IIT Bombay.



India's Energy Storage Moment

Go Power is currently evolving a new low cost , fast charging, air cooled, compact energy storage system...

For two applications - grid storage/ stabilisation and electric vehicle (air/water/road)

Go Power Seeks...

to engage with L&T

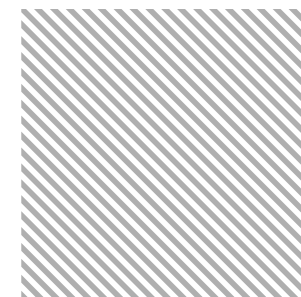


To develop the capability for global manufacturing of this disruptive innovation.

Through an appropriate alliance with the four arms of L&T...



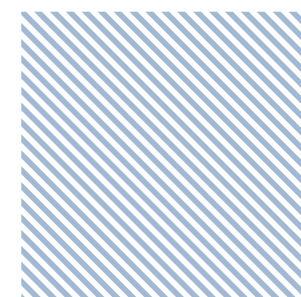
L&T proprietary process equipment division to develop the equipment required for mass manufacturing of the electrode (3 Kgs per KWH) globally.



L&T metals and speciality materials to manufacture this bespoke materials for Indian markets



L&T innovation fund to support the development of a pilot line for fine-tuning of process parameters for yield maximisation and process optimisation.



L&T solar and power EPC to help deploy the grid balancing/stabilisation solution globally.

Go Power Technologies Pvt Ltd



is an Indian Startup, selected as the premier partner for the AMAT AI platform of the IIT Alumni Council



To develop bespoke materials from earth-abundant materials (carbon, silicon, thorium and iron) as import substitutes (for lithium, nickel, molybdenum, cobalt and uranium).



Awarded by the IIT Alumni Social Impact Fund as one of the five most disruptive innovations which could become world leaders in their space - the other four being micro nuclear reactors, coal to gas conversion, high efficiency solar cells and digital cash.

Go Power Promoters



Dr Jyoti Joglekar
Distinguished Fellow -
Artificial Intelligence



Dr Vinay Juvekar
L&T Chair Professor - IIT
Bombay



Dr Rohinton Dehmubed
Distinguished Fellow -
Semiconductors

Alumni Mentor



Deputed by the Global Board of the IIT Alumni Council to guide the startup through setup, licensing, funding, and strategic alliances.

The IITAC initiatives stand on the shoulders of mentors and mission-driven engineers — united by the sovereign vision of nation-building.

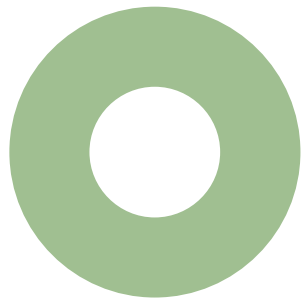
Satish Mehta

Alumni Mentor

Life Fellow, IIT Alumni Council



First recipient of the L&T Merit Scholarship at IIT (1983–87), Satish worked under Prof. Juvekar for his BTech project and was awarded the Acharya P.C. Ray Award by the President of India in 1987 for contributions to fertiliser equipment and process development at L&T—alongside Prof. Juvekar, Prof. R.A. Mashelkar, and Prof. M.M. Sharma.



Artificial Intelligence



AI applications

help accelerate design and production of novel bespoke materials based on earth abundant raw materials through suitably designed frameworks.



These include:

- . Heuristic search
- . Molecular dynamics simulation
- . Density function theory
- . With the AMAT AI platform (under alpha testing) as the foundational AI model being trained.



AI Governance & Responsible Intelligence

Designing for transparency, traceability, and trust in AI-powered material systems. AI must not only accelerate performance — it must earn trust with every decision it influences.

- AI models used for chemistry and materials undergo peer oversight and version control.
- All simulation outcomes are validated by lab-grade parameters, not just model output.
- We follow Explainable AI (XAI) principles where applicable — particularly in materials design.
- Ethical review of AI deployment spans data usage, design traceability, and safety thresholds.
- Predictive models are continuously refined using feedback loops from real-world test data.

RESEARCH MENTOR
AI & CV

**Jyoti
Joglekar**





Professor Jyoti Joglekar holds a Bachelor of Electrical engineering from Walchand College of Engineering Sangli, a Master of Computer Engineering from Mumbai University and a PhD in Computer Vision from IIT Bombay. She has over 25 publications in international journals and international conferences of repute.

Joglekar is a reviewer of reputed international journals such as IEEE Transactions on Geoscience & Transactions on Remote Sensing (TGRS), IEEE letters, IEEE Access, IET etc.

Joglekar has been honoured as Fellow member of IETE (Institute of Electronics and Telecommunication Engineering) and is a Distinguished Fellow on Computer Vision and Imaging AI at the PanIT Institute.

Joglekar has undertaken sponsored research for NESAC, DoS, Meghalaya in the area of image acquisition and processing using Swarm of Autonomous UAVs (Drones) for various surveillance and mapping operations that deploy holographic imaging techniques.

She is the Principal Investigator (PI) and focal officer for TDP (Technology Development Partner) research projects with NESAC, ISRO. She played a role as an expert for funded DST-RFBR research projects.

Joglekar won the second prize for her paper presentation at INAC-4 conference by ISSE and ISRO held at SAC, ISRO, Ahmedabad in September 2019.



Joglekar is an active member of the SIH Innovative Product Drive Ecosystem and has mentored three of the students' winning teams in Smart India Hackathon (SIH) 2018 and 2019.

Joglekar is the co-author of the widely prescribed "Internet of Things" engineering textbook published by Oxford University Press. She has over 25 years of teaching experience to undergraduate and postgraduate students.

Joglekar is an active research volunteer with IIT alumni Council since April 2020 and is working on several cutting-edge technologies in the area of ultrasound imaging and quantum computing being deployed by social initiatives of the Council. Her work continues to bridge the lab and the field — ensuring integrity across science, operations, and market readiness.



Internet of Things

Surya S. Durbha
*Professor,
CSRE, Indian Institute of Technology Bombay (IITB)*

Jyoti Joglekar
*Professor,
Department of Computer Engineering
K. J. Somaiya College of Engineering (KJSCE)
Somaiya Vidyavihar University (SVU)
Mumbai*

OXFORD
UNIVERSITY PRESS

Prof Jyoti Joglekar co-authored Internet of Things, which is currently used as a textbook. It underscores her proficiency in AI and IoT integration, shaping innovative energy solutions, including Megacell initiative.

RESEARCH MENTOR
INTERFACIAL ENGG

**Vinay
Juvekar**





Professor Juvekar has had a significant impact on the chemical engineering community as an outstanding teacher, gentle mentor, excellent researcher, and, above all, as a very warm and affable person.

Juvekar has published highly insightful work in many research areas, with a significant number of these manuscripts appearing in Industrial & Engineering Chemistry Research.

Prof. V. A. Juvekar obtained his B. Chem. Eng. (1970) and Ph.D. Tech (1976) at the University Department of Chemical Technology (UDCT) Mumbai. He then worked as an Associate Lecturer (1971–1974) and Lecturer (1974–1977) at UDCT, Mumbai (now ICT, Mumbai).



Prof. Juvekar then worked in the chemical industry from 1977 to 1984, first as a Senior Chemical Engineer (1977–1979) and then as an R&D Manager (1979–1982) at Industrial Processes (Maharashtra), Ltd.

Juvekar served as a Full-Time Consultant at Herdillia Chemicals (1983–1984).

Professor Juvekar started his academic career at IIT Bombay in 1984 (Assistant Professor, 1984–1990; Professor, 1990–2017; IIT Bombay–Emeritus Fellow, 2017 to present). He was bestowed the Fellowship of the Indian National Academy of Engineering.

He was also a recipient of Moulton Medal from the Institution of Chemical Engineers UK (1977), the Herdillia Award for excellence in basic research in chemical engineering (1996), and the L&T Chair Professorship (2012–2015).

As far as his research areas are concerned, Prof. Juvekar has focused broadly in four areas, viz. heterogeneous chemical reaction engineering, electrochemical engineering, colloid and interfacial engineering, and electrohydrodynamics.

Juvekar has graduated 30 Ph.D. and 72 Master's students (M.Tech. Dual Degree and Foreign Nationals).



RESEARCH MENTOR
ADVANCED MATERIALS

Rohinton Dehmubed





Dr. Rohinton Dehmubed has over 30 yrs. experience in engineering design and product development in the field of telecommunications, RF, optics and compound semiconductors across multiple continents.

Dr. Dehmubed holds a Ph.D. in Electrical Engineering from Columbia University in the field of Integrated Optics and a B. Tech. in Electrical Engineering from the Indian Institute of Technology in Bombay. Dr. Dehmubed has published several technical papers and holds multiple patents.

Dehmubed co-founded OPEL Inc. in 2001 which got listed on the Toronto Stock Exchange (currently trading under TSX: PTK) in June 2007.



As Vice- President in charge of product development at OPEL Dehmubed led the team to develop a complex III-V epitaxy for monolithic opto-electronic integration of optical communication devices for military and commercial applications.

Dehmubed has secured funding from private investors and government bodies and was on the board of directors of OPEL Inc. from 2005 until his departure in early 2007. Since then, he has been a mentor and investor in Cheekotel Venture Fund, a long-horizon deep tech fund focusing on markets in India and other emerging markets, and is a member of its advisory board.

From 1997-2001, Dehmubed worked at Transwitch Corporation in Shelton, CT, (NASDAQ: TXCC), where he was in charge of system development, definition and testing of high speed next-generation communication chipsets from DS3 (44Mhz) to OC-768 (40 GHz).

Prior to Transwitch, he worked in the field of free-space optics and plume measurements at Electro Optical Sciences and Contel Corporation. During his time at Contel, he tested the earliest Erbium Fiber Optical Amplifiers and Semiconductor Optical Amplifiers for the Fiber-in-the-Loop application.

Currently Dr. Dehmubed is a co-founder of Rubitel Inc., a startup specializing in electronic tamper evident packaging. In his spare time he likes to make gourmet chocolates and cheese.

ALUMNI MENTOR
DEEPTech | IMPACT FUND

**Satish
Mehta**





Satish Mehta is a veteran investment banker with deep roots in India's financial, regulatory, and startup ecosystems. Over the past three decades, he has specialised in funding deep tech and high science ventures while shaping the social impact investment landscape.

Deeply committed to nation-building through collaborative intellect, Satish has championed the convergence of science, capital, and public good. His current focus lies in enabling scalable platforms that translate breakthrough research into real-world solutions—particularly in healthtech, renewable energy, and mobility.

Mehta was instrumental in establishing key institutions of national importance including TRAI, SEBI, SIDBI, BSNL, and the IIT Alumni Council. He served on the Disinvestment Commission and led revitalisation mandates under BIFR during India's economic liberalisation.



Over the years, Mehta has helped shape India's startup and capital markets landscape —advising on private equity, SME listings, and alternative investment platforms.

He has served on investment committees of pioneering funds like Cheekotel Capital and Digital India Fund, backing innovations in AI, semiconductors, and quantum tech.

Known for aligning deep science with sound compliance, he remains a trusted mentor to researchers and institutions addressing complex societal challenges.

A founding force behind the IIT Alumni movement in the 1990s, Mehta continues to anchor its flagship initiatives, including the IIT Alumni Council and the ₹21,000 crore MegaFund. Mehta was part of the IIT COVID Task Force and continues to serve on several strategic working committees across public and private sectors.

Mehta is a certified investment banker and professional cinematographer, and serves as Head of Compliance & Regulatory on the investment committees of several PE funds. Mehta is also a visiting faculty and recognised authority in photogrammetry and cinematography.

An alumnus of IIT Bombay (BTech, Chemical Engineering) and JBIMS (MMS, Operations Research), he continues to bridge science, finance, and impact at the highest levels.

IIT Alumni Council confers Distinguished Fellowships to four eminent researchers

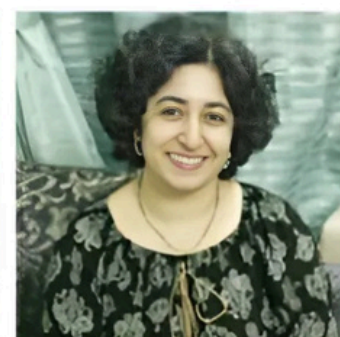
PanIIT grants honor on four for their original contribution to the development of key platform technologies



Dr. Kapil Talwar



Dr. Arindam Bose



Dr. Jyoti Joglekar



Dr. Rohinton Dehmubed

OUR BUREAU

New Delhi

IIT Alumni Council announces institutional strengthening of PanIIT Institute, an independent and autonomous partner alumni organization engaged in the development of an end-to-end deeptech Research Ecosystem in India – through the appointment of Distinguished Fellows in four key areas of Applied Science and Engineering.

"Excellence, nor mere competence is the hallmark of a Distinguished Fellow. The Distinguished Fellow program of the PanIIT Institute identifies, evaluates and awards the most distinguished alumnus from among i2Net institutions in each area of applied sciences and engineering. The focus is not just on publication of re-

search papers and filing of patents but on actual commercial implementation of key platform technologies that find application across multiple products or services," said Ravi Sharma, President and Chief Volunteer of the IIT Alumni Council.

Dr Jyoti Joglekar has been selected by the jury as the most eminent alumnus in the area of holographic imaging and related AI & ML technologies. She has a PhD from IIT Bombay in Imaging AI & Analytics and is a leading global researcher in photogrammetry and remote sensing. Bleeding edge technol-

ogies developed by her find applications in a very wide range of industries from Agritech and disaster management to Health-Tech and next generation diagnostics. "Fellowship is an honor for an academician. Thank you so very much for recognizing my contribution and honoring me for the same," added Dr Jyoti Joglekar.

Dr Rohinton Dehmubed received his B. Tech in Electrical Engineering from IIT Bombay and has a PhD in Electrical Engineering from Columbia University. He has led the development of core chipsets

based on advanced materials such as Gallium Arsenide with newer options relying on Gallium Nitride and substrates such as diamond and sapphire. The chipsets are fabricated using epitaxies with crystal growth technologies such as Molecular Beam Epitaxy which could involve up to 36 material layers and sub-nanometer scale, multiple quantum well layers. "For any technologist, It is indeed a matter of pride to receive the Distinguished Fellowship from the IIT Alumni Council"

Dr Kapil Talwar has a PhD in Chemical Engineering from Washington University, Saint Louis, USA. He has a BTech in Chemical Engineering from IIT Bombay. He has been a researcher, serial entrepreneur and angel investor. He is involved in cutting edge research

Continued on next page... >>



IIT Alumni Council confers Distinguished Fellowships to four eminent researchers

companies both in India and overseas in the area of next generation catalysts that are used in the emerging bio economy and green chemistry-based substitutes for mainstay process plants. "Green chemistry can be very profitable even in India, if the regulators ensure a level playing field" added Dr Talwar.

Dr Arindam Bose is a silver medallist of IIT Kanpur, 1975 batch. He has spent over forty years in industry, finally as a Leader in Biotherapeutics Pharmaceutical Sciences at Pfizer Worldwide R&D. His area of specialization is monoclonal antibodies that have been found to be useful for treating many diseases such as arthritis, fatty liver, cancer and others which had no cure in small molecule based pharmaceutical products. He has personally led the development of several monoclonal antibodies that have received FDA approvals and was selected as the most eminent IIT Alumnus in this fast-emerging domain. "Biologics is one industry that India can lead in, especially monoclonal antibody based biotherapeutics", said Dr Bose.

The PanIIT Institute awards three types of Fellowships – Distinguished Fellowships, Life Fellowships and Honorary Fellowships. Distinguished Fellowship is the highest membership honor that the PanIIT Institute bestows upon its members. The Distinguished Fellowship is awarded to PhDs who have made significant contributions for the development of key platform technologies.

These technologies should have been successfully commercialized for applications across a wide range of products or services. Life Fellows are eminent industry experts. Honorary Fellows are global achievers who are not alumni of the IITs or

other India Innovation Network institutions.

Dr. Jyoti Joglekar

Dr. Jyoti Joglekar holds a Bachelor of Electrical engineering from Walchand College of Engineering Sangli, a Master of Computer Engineering from Mumbai University and a PhD in Satellite Image Analysis from IIT Bombay. She has presented her research work in several International conferences of repute such as the International Society of Photogrammetry and Remote Sensing (ISPRS). Technology developed by her was an important constituent of some of the core data analysis applications developed with Chandrayaan-1 data by SAC, ISRO, Ahmedabad. She has over 25 publications in international journals and international conferences of repute. She is a reviewer of reputed international journals such as IEEE Transactions on Geoscience & Transactions on Remote Sensing (TGRS), IEEE letters, IEEE Access, IET etc. She has been honored as Fellow member of IETE (Institute of Electronics and Telecommunication Engineering) and is a Life Fellow on Computer Vision and Imaging AI at the PanIIT Institute. She is a member of the Board of Studies, Department of Computer Engineering, Mukesh Patel school of Technology, NMIMS, Mumbai, the Department of Information Technology, Cummins College of Engineering, Pune and Science college at SVU.

Dr Kapil Talwar

Dr Kapil Talwar holds a BTech in ChE from IIT Mumbai and a MS & PhD in Chemical Engineering from Washington University at St Louis. He has an MBA from Melbourne Business School. He has been a

serial entrepreneur in the technology space having exited several start-ups to established Industry leaders.

Experience is concentrated around the confluence of business, science and technology, and include broad exposure to ancillary functions that support business growth. Professional Experience: Startup management, development and growth, capital raising, financial modelling and budgeting, investment due diligence, market strategy development, business development, corporate strategy, product planning, operations, program management.

Dr. Rohinton Dehmubed

Dr. Rohinton Dehmubed has over 30 yrs. experience in engineering design and product development in the field of telecommunications, RF, optics and compound semiconductors across multiple continents. He co-founded OPEL Inc. in 2001 which got listed on the Toronto Stock Exchange (currently trading under TSX: PTK) in June 2007. As Vice-President in charge of product development at OPEL he led the team to develop a complex III-V epitaxy for monolithic opto-electronic integration of optical communication devices for military and commercial applications. He has secured funding from private investors and government bodies and was on the board of directors of OPEL Inc. from 2005 until his departure in early 2007. Since then, he has been a mentor and an investor in Cheekotel Venture Fund., a long horizon deeptech fund focusing on the markets in India and other emerging markets and is a member of their advisory board. From 1997-2001, he worked at Transwitch Corporation in Shelton, CT, (NASDAQ: TXCC), where he was in

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Dr. Arindam Bose

Dr. Arindam Bose retired from Pfizer Worldwide Research & Development in 2016 after 34 years in leadership roles in bioprocess development and clinical manufacturing. Dr. Bose's final position at Pfizer was Vice-President, Biotherapeutics Pharmaceutical Sciences with responsibility for external sourcing, competitive intelligence and external influencing as well as for executing the technical development plan for Pfizer's entry into biosimilars.

He is widely recognized as a Key Thought Leader in the biopharmaceutical industry. Dr. Bose was elected to the US National Academy of Engineering for innovations in biologics manufacturing. Dr. Bose currently provides consulting services in bioprocessing to several start-up biotechnology companies including a part-time process development management role at Akero Therapeutics. He received a Ph.D. in chemical engineering from Purdue University, a M.S. from the University of Michigan, Ann Arbor and a B. Tech from the Indian Institute of Technology, Kanpur.

Dr Arindam Bose has been a key mentor and coach to the engineered biomolecule initiative of the IIT Alumni Council.

“Technology can generate money, but money cannot always buy technology”

Developing a core platform technology is more important than generating short-term export revenue



Prof Jyoti Joglekar is the Distinguished Fellow for Holographic Imaging and AI. She is a resident of Mumbai and has spent close to 20 years as a researcher in computer vision, photogrammetry, remote sensing, image manipulation and analytics. Most of her work is oriented towards real world applications that range from developing photogrammetric methods for applications ranging from predicting forest fires to digital elevation models on water resources to 3D scanning in real time for lossless transmission. In an interview with the Indian EYE, Prof Joglekar spoke about her life journey and achievements. Excerpts:

Professor, congratulations on being nominated as a Distinguished Fellow in the area of Holographic Imaging and AI. Could you briefly explain this subject and your role in it?

In a simplified language, Holographic imaging is perceiving depth information for developing a 3D model of an object or a scene. We do this from a series of images, by extracting information hidden in the parallax. It is similar to how the human brain uses images from two eyes in stereo vision to develop a 3-D structure – by using the images captured from two different view-points. This kind of information is critical for applications like autonomous cars or in robotics where assessing depth is very important. I have been working in technologies such as



PanIIT Fellowship Awardees Q&A with Dr. Jyoti Joglekar

Computer Vision, Holography and 3D DEM generation for around twenty years. I was thus rightly positioned to develop innovative architectures based on these platform technologies. Since we did not have access to such technologies which originate from the defence and space sectors in developed countries – I started from scratch. I have focused on this domain exclusively. It became my passion and then I realised I probably knew about as much if not more than my peers in developed countries. I used this fundamental research to develop innovative applications in a wide range of areas including but not limited to agriculture, healthcare, urban planning, climate change assessment, transportation planning, mining and economic activity assessment. As an academician, I had the support of a large number of students who had to be given projects. These were

BTech students, MTech and even PhD students. So, there was a massive multiplier effect which required negligible funding.

In more ways than one, you represent the new face of the Indian academic researcher – electrical engineer, lady, researcher, strong application understanding, academician, research publication author in high index journals. You have become some kind of a role model for other academicians. What is your advice to other ladies who may want to follow in your footsteps?

Certainly, career building as a researcher is a tough task for a lady as she often needs to contribute substantial time for family issues. Because of this, they often feel that they are left out. Some colleges have age restrictions for appointment of faculty for example. In my opinion, proper time management and domain focus can easily compensate for this delay. It should

not be considered as a hurdle. The key is domain focus so that you can keep adding to your expertise vertically.

A career in research is very different from say one in industry as an MBA – research is all about depth and not so much about width. I think, more and more lady researchers should come forward to develop a complete stack of technologies, right from fundamental research and basic hardware components so that totally indigenous, economical and innovative application & product development can be accelerated.

A lady academician can play an important role to guide and motivate her students. She is a caring personality by nature and can inculcate such interests in her students. I treat my student just like my own child – and I am equally strict as well. This is something that a mother does better. Because she values the flexibility of an academic job, she can do long runway projects without necessarily seeking monetary benefits. This makes here suited for fundamental research which is the base of any innovative platform stack. You need a solid foundation to build a tall building. Often, we don't see the time that goes into digging a deep foundation – the world only sees the height of the building. But without a strong foundation, the building will fall. And good basic education, a thorough understanding of the core concepts and the fundamental science is that foundation.

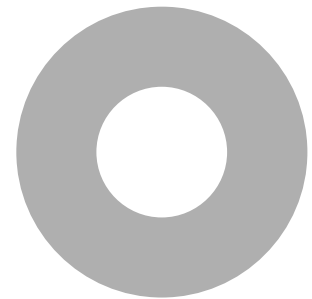
Why did you prefer to stay back and work in India? In your niche area, global demand must be high...

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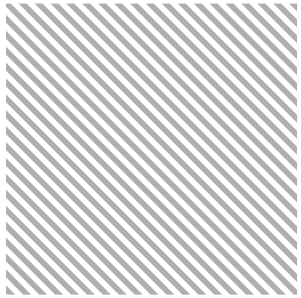




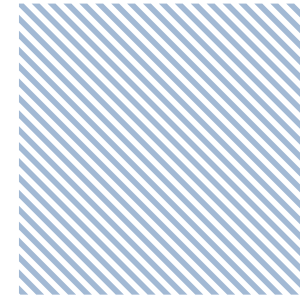
We have the science.
The time now is for courageous, intelligent
scaling — done responsibly, and done in India.



Core Principles of MegaCell



Material Agility: Tunable across use-cases — from mobility to grid storage — by varying electrolyte + architecture.



AI Integration: Simulates, predicts, and accelerates innovation while reducing experimental costs.



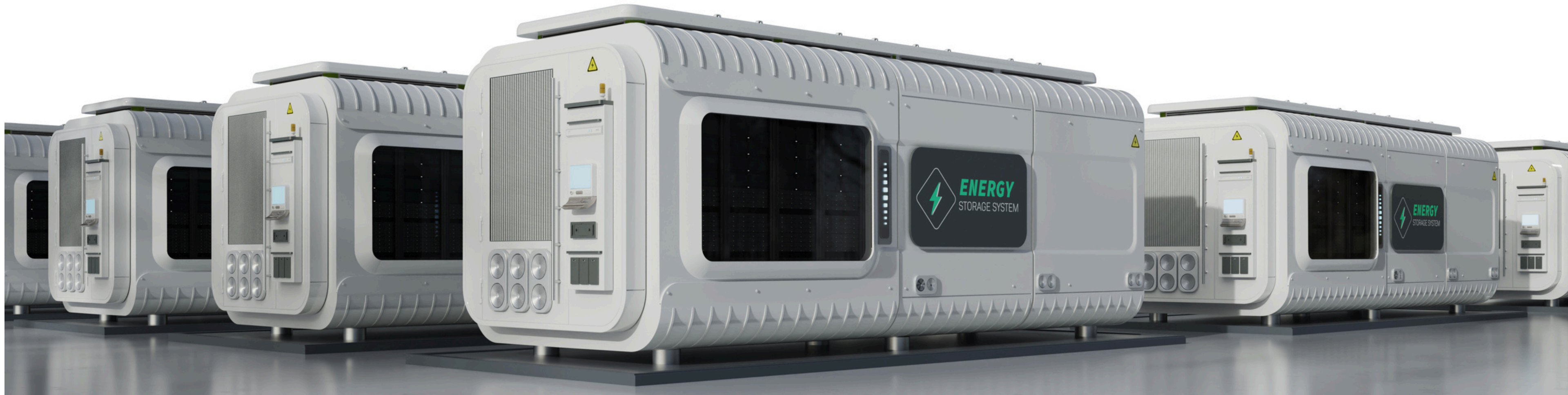
Form-Factor Flexibility: Compact, air-cooled, and stackable — engineered for Indian environments and export-ready platforms.



Sustainability Embedded: Designed for recycling, low-toxic profiles, and future regulatory pathways.

Storage is a Spectrum

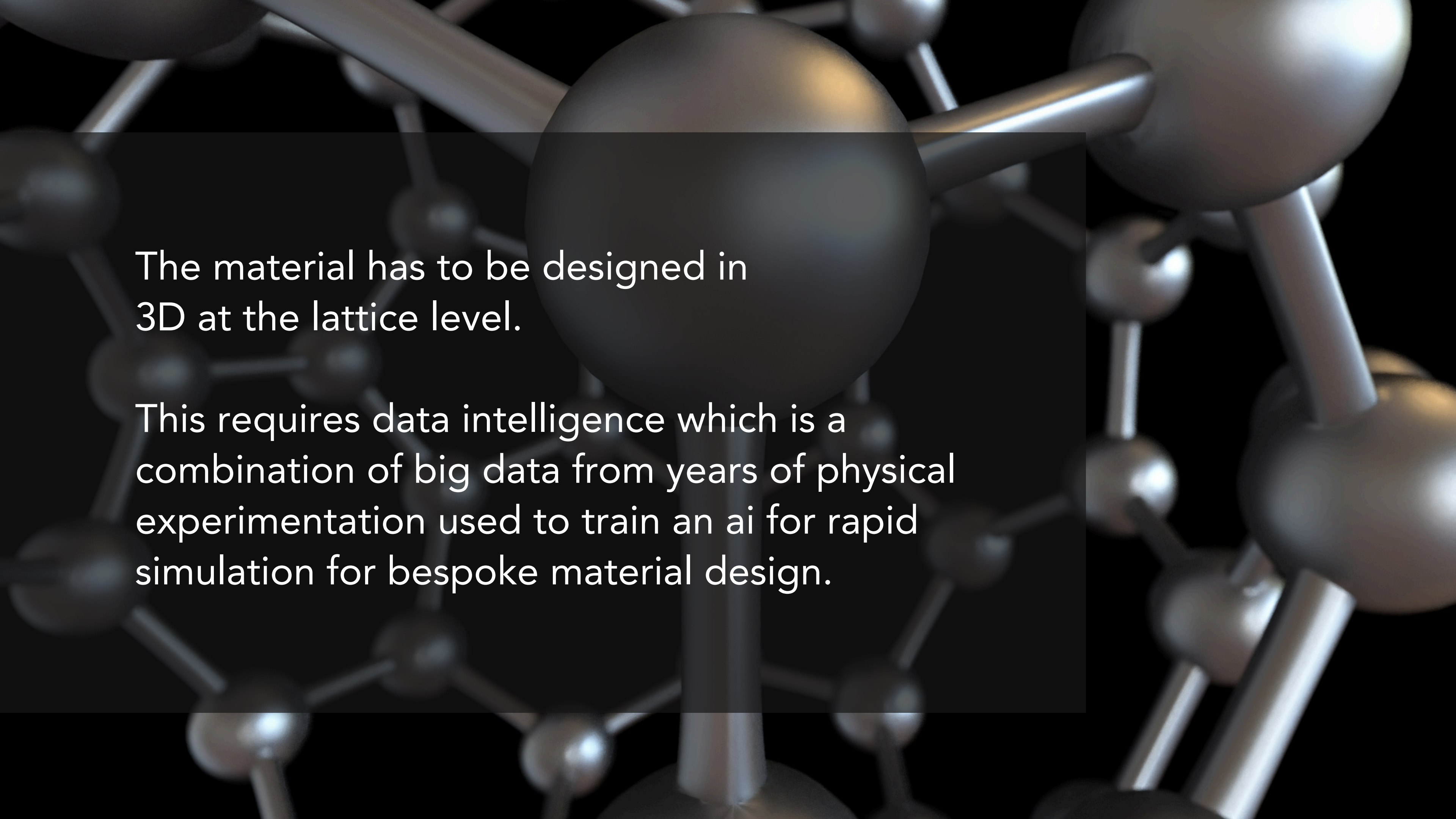
with a Lead acid battery on one end and a super-capacitor on the other.



The Geometry of Innovation or Chemistry, Computation, Creation

AI helps create not just new chemistries — but
new classes of materials altogether.





The material has to be designed in 3D at the lattice level.

This requires data intelligence which is a combination of big data from years of physical experimentation used to train an ai for rapid simulation for bespoke material design.

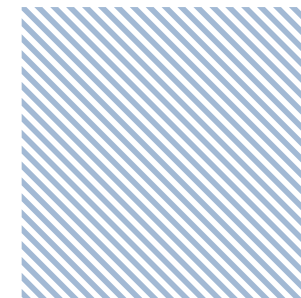
Go Mobility Platform

of the IIT Alumni Council ecosystem.

It has already achieved substantial traction with a plan to set up PPP (Public-Private Platform) companies in seven states.



These PPP companies would compete/co-operate with and complement the existing electricity distribution/ generation and public transportation companies.



These entities envisage creation of competitive advantage through AI.

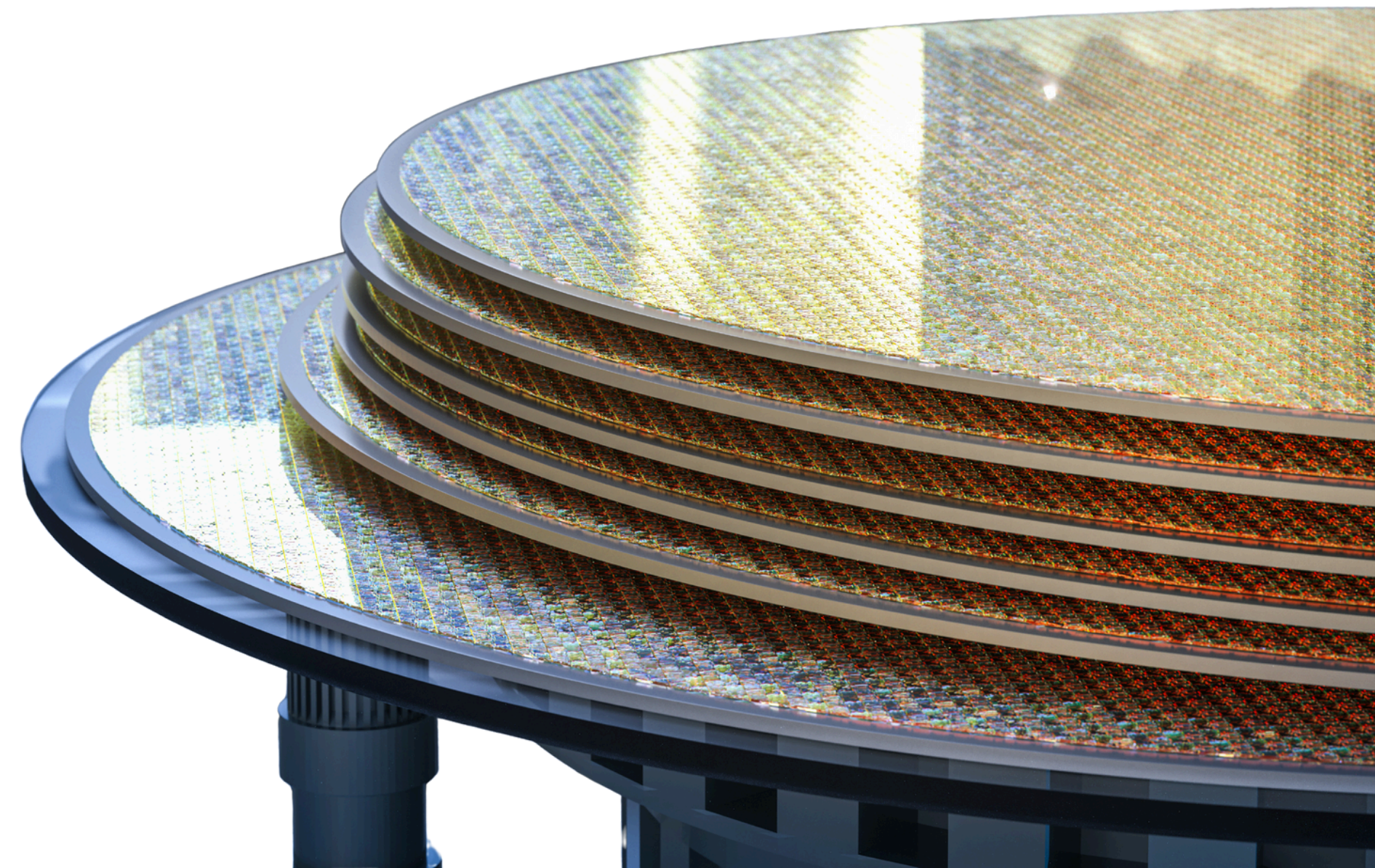


A sustainable, net-zero battery solution which is highly environment friendly and health friendly.

It uses 100% indigenous raw materials and can scale to meet global demand without the need for expensive imported raw materials or the need for environmentally unsustainable manufacturing processes.

AI can help emulate the semiconductor industry's price-performance cycle in the area of energy storage.

Carbon for example can be used to produce zero band gap semiconductors as well as serve as the substrate for next generation chipsets.





3D structures such as those seen in ancient Indian temples are used for mechanically separating the electrons and protons in the electrolyte.

This approach can in theory yield MegaCell configurations that weigh just one kg per kwh. As of now, there is no known way to create these without extensive use of AI.





ionique

PERPETUAL POWER



ELECTROLYTE MANUFACTURING

ASSEMBLE TEST VEHICLES

ASSEMBLE TEST BATTERIES

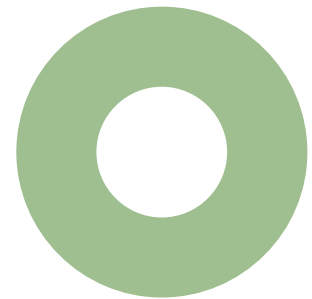
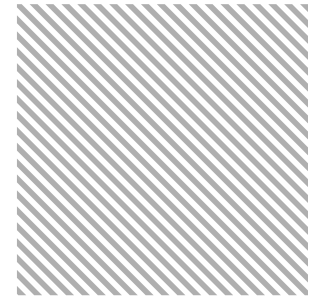
DEVELOP ELECTROLYTE PLANT



Location

Ionique is located in a 75,000 sqft pilot plant and R&D centre in Noida near Delhi in a SEZ.

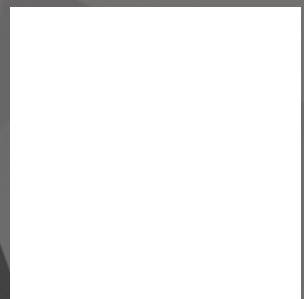
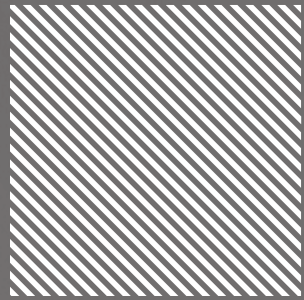
Mentor Panel



Desired Outcome

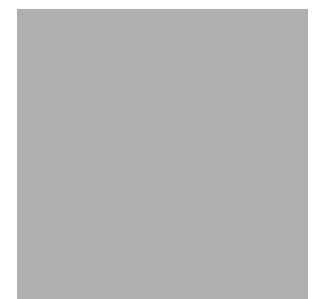
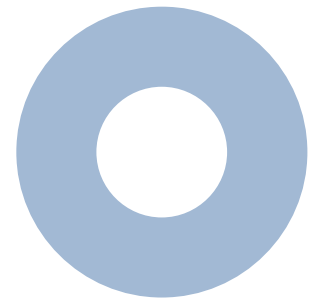






Annexure 1

May June 2025 Update

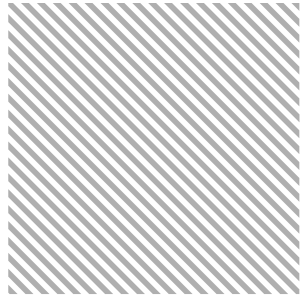


30-Days Update



-
- Company formed & operationalised.
 - User partners finalised.
 - Boards of PPP user entities being firmed up.

Initial use cases include electric vehicles (EVs) for public transportation and an AI-powered smart grid.



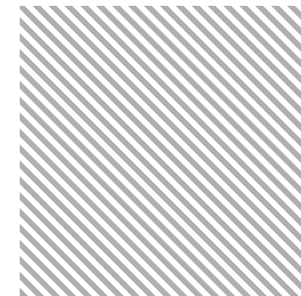
Partner organisation tied up with ready infrastructure to produce process plant equipment using additive technologies.



Source for SS powder tied up from Finland. This was on the critical path of the PERT.



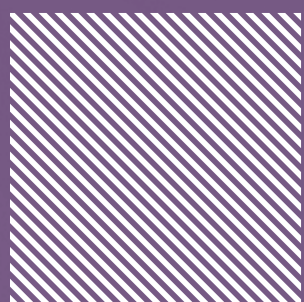
Model worked out to start delivering modules identical to the ones proposed based on existing commercially available products by 31.3.26.



Partner organisation has procured licenses for manufacturing of requisite modules - before and after novel material is ready.

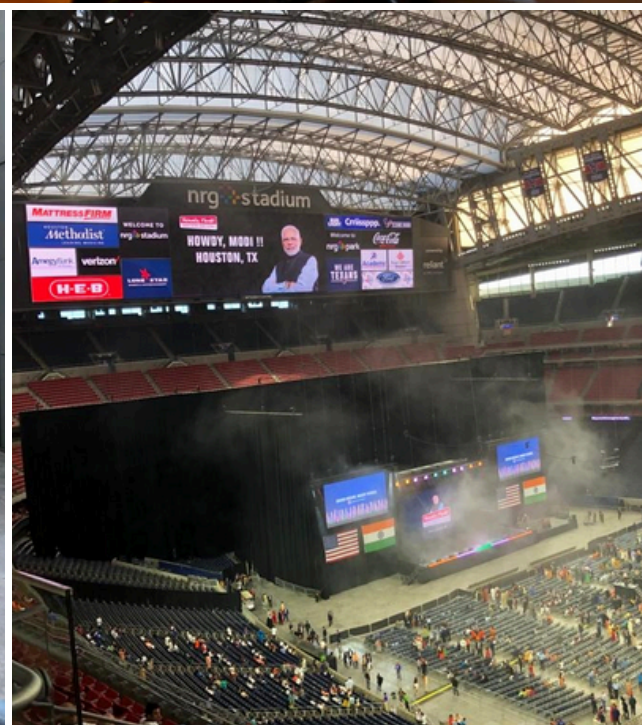


Regulators and policymakers makers sensitised through media coverage.



Annexure 2

IIT Alumni Council



IIT Alumni Council is now the largest global body of alumni across all the 23 IITs and partnering Universities.

The IIT Alumni Council aspires to align Alumni resources towards catalysing India's technological renaissance for a digital society.

The member alumni actively participate in social ventures that are configured to solve key national challenges through the deployment of appropriate technologies using the well-proven venture capital funded start-up format.





Scale & Impact

Largest philanthropic body of its kind, backed by 40,000+ highly technology literate, globally distributed IIT Alumni

USD 3 Billion+ committed to India's technological renaissance

USD 100 Million+ deployed to speed manage Covid outbreak in Mumbai.

The core idea is to accelerate India's socio economic progress through a prudent combination of technology development & deployment, public policy advocacy & sensitisation and market failure correction.

This is done using venture capital paradigms and facilitating industry-academia-alumni-government interaction & involvement.



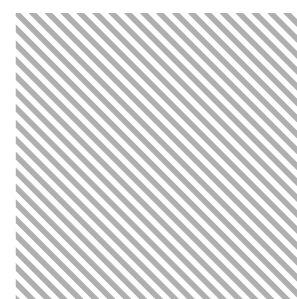
MegaFund.in is India's largest domestic social impact fund. Consortium of funds with a USD 3 Billion corpus led by the SEBI registered and regulated AIF - IIT Alumni Social Fund.



Target:
2025: Biofuel No. 1
2026: Crypto No. 1
2027: Photovoltaic No.1
2028: Energy Storage No. 1



MegaFund has shortlisted 16 of ASPI Australia's 64 critical technologies for intervention, aiming to position India as a global leader in one each year.



When MegaFund was launched, India was not in the top five in any of the 64 critical technologies. China led in 47, the rest were led by USA.



MegaFund address four core areas - Climate Resilience, Human Health, Energy Transition and Frontier Technologies.

IIT Alumni Council Calls for Industry Collaboration to Manufacture Advanced Sustainable Materials at Global Scale



Updated On : 09 Jun 2025 | 11:50 PM IST

IIT Alumni Council to Co–Create India's first Global Shipbuilding Research Institute



Dr DS Shin with Kiran Jadhav and Tom Shin, CEO of Komag Korea signing the MoU for joint development of India's first VLCC

Updated On : 22 May 2025 | 11:50 PM IST

IIT Alumni Council seeks technology development proposals to control potentially rogue technologies like cyber–attacks, gene editing and agentic AI



Updated On : 17 Apr 2025 | 11:40 PM IST

IIT Alumni Council to onboard industry partners for rapid deployment of frontier technologies in key emerging areas like nuclear and digital cash



Updated On : 02 Apr 2025 | 11:55 PM IST

IIT Alumni Council announces the launch of its Generative AI Platform (GAP) for accelerated creation of non–fiction books and OTT video series



Updated On : 02 Jan 2025 | 11:40 PM IST

Beeja House Launches the 100 book FORUM series by IIT Alumni Council with 'Accelerate your journey' on Climate Resilience



Updated On : 02 Oct 2024 | 11:40 PM IST

IIT Alumni Council Calls for Industry Collaboration to Manufacture Advanced Sustainable Materials at Global Scale



PNN
New

IIT Alumni Council invites industry to collaborate on mass production of next-gen materials via AI-driven platforms like AMAT AI, aiming to replace scarce elements with abundant ones.

Delhi [India], June 9: The IIT Alumni Council has invited leading industrial players to collaborate on the mass production of next-generation materials, designed using principles from the semiconductor industry and accelerated by AI-driven platforms.

At the heart of this initiative lies the AMAT AI Platform--a foundational large material model under development. Its goal: to replace scarce, expensive elements like lithium, cobalt, molybdenum, nickel, and indium with earth-abundant alternatives such as coal, thorium, silica, and iron ore.

"These projects require significant capital investments--often exceeding Rs10,000 crores," said Ravi Sharma, President and Chief Volunteer, IIT Alumni

Council. "They include the design and fabrication of high-throughput process equipment and large-scale manufacturing plants. Our role is to act as a knowledge partner and incubate research startups via our Social Impact Fund. These startups are critical in adapting and refining the core technologies for industrial-scale deployment."

Reimagining Materials, Redefining Possibilities:

"Materials like carbon and silicon are extremely versatile," explained Mr. Jitendra Singh, Distinguished Fellow, IIT Alumni Council. "Carbon ranges from diamonds to coal, graphene superconductors to carbon insulators--depending on its structure. Silicon, when doped, transforms into a semiconductor. Together, carbon and silicon form silicon carbide, a key candidate for low-cost inverters and devices. We are also exploring zero-gap semiconductors, which could disrupt industries like energy storage, HVAC, and turbine manufacturing through new architectures like high-efficiency thermoelectric generators (TEGs) and Peltier-based cooling systems."

A Turning Point in Green Chemistry:

"AI's most visible early contribution to materials science is here," added Mr. Shashi Shekhar, environmentalist and former Secretary, Ministry of Water & Ganga Rejuvenation. "When combined with additive manufacturing and Industry 4.0, this opens the door to safe, sustainable, and high-performance materials. These can even replace corroding materials like ToR steel or expensive ones like food-grade stainless steel."

Shashi Shekhar, who now serves as Vice Chairman of Acme Group, noted that the Government of India's Green Hydrogen Mission is pushing for decarbonization of the steel industry.

"By aligning with the IIT Alumni Council, we plan to develop green steel alloys that are cost-effective, sustainable, and suitable for high-performance applications like additive manufacturing and specialized equipment."

Industry Progress and Global Partnerships:

Recently, Outokumpu delivered its first batch of specialty powdered stainless steel for 3D printing applications such as heat exchangers and aerospace components.

"It's remarkable that the IIT Alumni Council foresaw this trend and began building the ecosystem early--spanning AI-driven material innovation to carbon-free green steel production," said Mr. Y.P.S. Suri, former MD of Outokumpu India and IIT Kharagpur alumnus. "We are entering a new paradigm. I look forward to seeing the world's first process plant built entirely through additive manufacturing."

Gratitude to Visionary Contributors:

"The development of the AMAT AI Platform wouldn't be possible without the unwavering support of India's top corporations and visionary leaders," said Satish Mehta, Convenor of the IIT Alumni Social Fund.

He acknowledged contributions from:

Tata Group, Birla Group, Jindal Group, L & T, Reliance, Adani, ArcelorMittal, Oclor, Acme, Coal India, HPCL, among others.

He also thanked key members of the National Solar Task Force, including:

Padma Shri Prof. Ashok Jhunjhunwala, Prof. Juzer Vasi, Prof. Dinesh Kabra, and Prof. Anil Kottanthayil, for their guidance in the context of photovoltaics.

A special mention was made for the Distinguished Fellows of the IIT Alumni Council, including:

AI Chief Mentor Prof. Jyoti Joglekar and Silicon Valley collaborators Dr. Rohinton Dehmubed and Dr. Milind Kulkarni

"Their thousands of hours of effort and deep domain expertise have been instrumental. We thank each one of them."

Interested industry partners may write to applications@iitalumnicouncil.org on or before June 30, 2025

About IIT Alumni Council

IIT Alumni Council is the largest global body of alumni across all the twenty-three IITs. The Council aggregates the technological and philanthropic resources of over 50,000 alumni spread across one hundred city chapters. The IIT Alumni Council aspires to catalyse India's technological renaissance. The Council supported initiatives are funded through the IIT Alumni Social Fund. Council members are aligned with the various mission organisations (social fund, alumni outreach and longevity missions) and mission facilitators (startup incubator, project management & advisory forum and research institute)

www.iitalumnicouncil.org

About IIT Alumni Research Institute

IIT Alumni Research Institute is a mission organisation of the IIT Alumni Council. With over 500 distinguished fellows, over 250 industry partners and close to 100 academic partners - the Alumni Research Institute is establishing centres of excellence across twenty identified target industries, covering all the 64 advanced critical technologies.

www.institute.net.in

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Business Standard

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IIT Alumni Council to Co-Create India's first Global Shipbuilding Research Institute

PNN

New Delhi [India], May 22: IIT Alumni Council to act as sponsor and knowledge partner to co-create a green-shipping-focused research institute and university. The institute would be a part of the shipbuilding megacity being created on the Indian coast. This greenfield facility will cater to the emerging global market for cryogenic liquid hydrogen carriers, ammonia-fueled ultra-large crude carriers, nuclear-powered container ships and other next-generation vehicles required for the transition to sustainable shipping. Ravi Sharma, President and Chief Volunteer of IIT Alumni Council, added, "Pollution caused by ships already exceeds that caused by all private cars in India. Shipbuilding is an area where India can directly lead in the latest technologies – just like it has done in mobile telecom or digital banking. Import substitution is the immediate goal, but global leadership – in this service, people and technology-intensive industry – is the end objective."

"Korea's global success has been a direct result of significant R & D investments – both in industry and in academia. This collaborative approach is the key to success in shipbuilding. For Korea, shipbuilding has been one of the pillars on which the country's global success in technology was built. I have been a great believer in the potential of India. I was fortunate to attend the first edition of vibrant Gujarat in September 2003.

Since then, I have been very impressed with the progress catalysed by the leadership of Mr Narendra Modi," said 92 year legendary shipbuilder and celebrated naval architect, Dr Dong Shik Shin of Korea who is revered as the "Father of modern shipbuilding" and widely credited with the creation and success of Asia's shipping industry outside of Japan. Dr Shin was appointed by the late President Park Chung Hee to serve as an Advisor and Chairman of the Special Maritime Advisory Committee, Senior Economic Secretary and Secretary General of the Presidential Board in the fields of Economy and Science.

Dr Shin has played a pivotal role in planning the national economic development and overseeing Korea's economic advancement, especially in the fields of heavy industry, maritime affairs, science and technology and basic infrastructure. Dr Shin has been awarded as the Distinguished Fellow in Shipbuilding by the IIT Alumni Council and is being nominated as a Professor Emeritus and Member of the Senate of the Shipbuilding University.

"For close to two years now, I have been travelling with the IIT Alumni teams to study existing shipyards as well as explore zero carbon options for next gen ships. India is more cost-effective than any other country for bespoke, high technology manufacturing because of its deep pool of engineering talent and ERS (engineering and research service) providers. What is currently missing is the required infrastructure to build such massive ships and the supporting ecosystem.

We also have a lot of catching up to do on large sized steel plates, design automation data bases and advanced electronics which are now all standard in the industry," added Commodore R. Balasubramaniam, a highly respected naval R & D veteran who has been involved with the conceptualisation, design, construction and maintenance of some of the Indian Navy's most prized assets, including the naval ships and design of shipyards. Commodore R. Balasubramaniam is an awarded Distinguished Fellow of the IIT Alumni Council in the area of Nuclear Powered Vehicles and is being nominated as a Professor of Practice and Member of the Senate of the new Institute.

"There are only a handful of global players who have the capability to design and build a VLCC or ULCC. It doesn't make sense to reinvent the wheel. Thus, the immediate plan is to acquire proven Korean designs for India's first very large crude carrier (VLCC) from Komag – the world leader in this space. This will help India to catch up and enter the closed club of countries capable of building VLCCs. Dedicated test facilities can validate systems prior to hull integration.

Digital Twin technologies could radically reduce the time for construction. Future technologies have to be invented, not imported. The Shipbuilding University is thus a timely step in the right direction by the IIT Alumni Council," added Mr Kiran Jadhav, Distinguished Fellow of the IIT Alumni

Council for Defence Vehicles. He is also the cofounder of Kanoji Shipyard which is designing and building India's first VLCC with green fuel and nuclear options.

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To Know More: <https://bit.ly/3SMMXTj>

To interact with IIT Alumni Council, write to: media@iitalumniCouncil.org

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Business Standard May 22

Business Standard

IIT Alumni Council to onboard industry partners for rapid deployment of frontier technologies in key emerging areas like nuclear and digital cash

ATK
New



IIT Alumni Council to onboard industry partners for rapid deployment of frontier technologies in key emerging areas like nuclear and digital cash

Delhi [India], April 2: The IIT Alumni Council acts as a knowledge centre and enabler to identify and deploy frontier technologies. Cost-effective access to these shortlisted technologies is critical for India to achieve stated goals for socio- economic progress, import substitution, environment preservation, quality of life enhancement, export revenue growth and global technology leadership.

Accordingly, the Council had facilitated the creation of a social impact fund (www.megafund.in) to provide patient capital for research intensive startups. In conjunction with its mission organisations, the Council identified six key technologies in September 2020 for capability and competency creation. The identified areas included electric transportation & drones, nuclear sciences & perpetual power, renewable energy & gaseous fuels, engineered biomolecules & vaccines, quantum technologies & cybersecurity, artificial intelligence & computervision and fintech.

In furtherance of the above, the Council had onboarded startups in the incubator (www.incubator.org.in) and Distinguished Fellows in the research mission (www.institute.net.in) to accurately define the problem statements and related technologies. The Council has signed MoUs with a wide range of organisations including CSIR, DRDO, Universities, Global Players, Stock Exchanges and startups. The Social Fund has defined around ten main platforms for funding and created a fund consortium with leading Tier 1 funds and CSR Foundations to enable provision of patient risk-taking capital, catalyse stock market listing and facilitate pilot projects. The Council has also constituted Task Forces in over twenty areas led by eminent alumni, scientists and technocrats to help determine technology gaps and identify policy changes required. In many of these identified areas, SPVs are being created - as public private partnerships or private sector joint ventures - to facilitate rapid commercialisation and global scale deployment in India.

"For electric transportation, the key challenge is to enable a mass shift from human driven private vehicles to autonomous public transport. The three key enabling technologies to do this are electricity storage, solar air conditioners and digital twins", added Dr Rakesh Seth, Founder of Ionique Innovation, Distinguished Fellow IITac - Electric Transportation and Chief Mentor - Electric Buses of the Go Mobility Platform.

"Micro nuclear reactors and electric transportation go hand in hand. Nuclear submarines and semiconductors for heat to electricity conversion (called TEGs) have been used by the India Navy for over fifty years. Primary challenge now is to improve the price performance by a factor of ten or hundred" according to Commodore R. Balasubramaniam, eminent Naval R & D veteran, Distinguished Fellow IITac - Shipbuilding and Chief Mentor - Water Transport of the Go Mobility Platform.

"As a tropical country with abundant sunshine, renewable energy should be a large part of our energy basket. We need to develop the capability and competency to go from sand to solar power. Once the capability is in place, rapid capacity creation can avoid the Rs 30 lac crores outflow on import of solar products and equipment," added Dr Milind Kulkarni, Founder of RSolec, Distinguished Fellow IITac - Semiconductors and Chief Mentor - Silicon Wafer Technology for the MegaSolar Platform.

"During Covid, we were able to demonstrate our global leadership in genetic diagnostics. Engineered biomolecules play a key role in the development of next generation early warning diagnostic tests for an entire range of requirements - from biological age assessment and gut biome analysis to epigenetic assessment and liquid biopsies for timely cancer detection." According to Pallavi Jain, Executive Director of Krsnaa Diagnostics, Distinguished Fellow IITac - Genetic Diagnostics and Chief Mentor of the Kodoy AI Platform.

"Cybersecurity is a crying need because cyber-attacks are making businesses cry. The challenge is to make our data resilient to attacks. The key is preparedness, stringent audit requirements and strong data privacy laws. Unlike physical theft, your data may be stolen, and you may not even know anything is missing. Or your data may be exactly where you kept it, but ransom seekers may prevent you for accessing it," added Sanjay Sahay, former IPS officer and Founder of TechConPro, Distinguished Fellow IITac - Cybersecurity and Chief Mentor - Data AI Platform.

"Artificial Intelligence and computervision is a foundational science. Self-learning and self-programming machines already exist. Platforms like ChatGPT and Kodoy are making the power of AI available to the common man," according to Satish Mehta, Convenor of MegaFund, Distinguished Fellow IITac - Photogrammetry and Mentor- Kodoy AI Platform.

"Crypto is a foundational technology like artificial intelligence. India is one of the first countries in the world to launch its own central bank digital currency. What the internet did to information, digital currency can do to money. It might well be the biggest asymmetric opportunity of the 21st century. India with its solid digital public infrastructure, lowest broadband costs, global leadership in IT services and a young demographic - is positioned to lead globally," according to Taron Mohan, Founder of Mobipay and Distinguished Fellow IITac - Digital Payments.

The Council now seeks to identify and engage with suitable industry partners with adequate resources to catalyse the development of appropriate indigenous technologies which could be mass commercialised over the next five years. The focus of the Council is on technologies (like nuclear fission) where the foundational science is well established and substantial enhancements to price performance can be achieved through the induction of new frontier technologies like ai, blockchain, proteomics etc

Those interested in collaborating with the Council to partner for development of the above technologies may write to applications@iitalumnicouncil.org . The Council is open to all forms of partnership with well-established companies with adequate resources - either directly through the creation of PPP and SPV type entities - or through startups supported by the IIT Alumni Social Impact fund.

IIT Alumni Council

IIT Alumni Council is the largest global body of alumni across all the twenty-three IITs and other partnering Institutes. Established in 2019, the IIT Alumni Council aspires to catalyse India's technological renaissance. The Council aspires to both compete and cooperate with initiatives of the Indian government in areas like climate change, human health and deeptech. IIT Alumni Council works to act as a network and as a bridge between various providers of wisdom, knowledge, information, ideas, expertise, wealth and entrepreneurship to promote technological solutions to social challenges. (https://iitalumnicouncil.org/)

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Business Standard | Apr 2

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IIT Alumni Council announces the launch of its Generative AI Platform (GAP) for accelerated creation of non-fiction books and OTT video series



IIT Alumni Council announces the launch of its Generative AI Platform (GAP) for accelerated creation of non-fiction books and OTT video series

ATK

New Delhi [India], January 2: The IIT Alumni Council proudly announces the launch of its Generative AI Platform (GAP), an innovative tool designed to revolutionize the creative process of crafting and sharing inspiring life journeys through non-fiction books and video documentaries.

GAP is a bold 100-week mission initiated in April 2022 alongside the launch of The Maverick Effect. Authored by IT industry veteran, NASSCOM cofounder, and its first elected Chairman, Harish Mehta, the book took a team of seven experts over three years to compile. Praised as "a definitive and authoritative biography of NASSCOM" by Infosys founder N.R. Narayana Murthy and described by Tata Sons Chairman N. Chandrasekaran as "a parable of our shared homeland...with no shortage of inspiration," The Maverick Effect

uncovers the untold story of India's IT revolution. The book inspired IIT Alumni Council donors and members to emulate Harish Mehta's storytelling legacy, uncovering hidden tales of transformative movements that could inspire generations. However, the decade-long journey of creating such impactful works highlighted the need for a faster yet equally authentic process, leading to the creation of GAP. "With The Maverick Effect, we captured how NASSCOM sparked India's IT revolution. GAP builds on this legacy, enabling transformative stories to be told faster, bolder, and with unmatched authenticity," said Harish Mehta. The impact of the book also inspired a Harvard case study on the power of self-regulation.

Transforming Storytelling Through GAP

The GAP framework, beta-tested in 2023-24, successfully produced autobiographies, self-help books, and technical compendiums ranging from 200 to 1,000 pages. To expand its reach, the Council has partnered with Forum Publishing (for books) and Anytime Media (for videos). GAP is now being applied to the Vishwaguru Book & Video series, a 21-book project chronicling the journeys of the Council's Lifetime Achievement Awardees. Content is optimized for interactive tablet viewing, video integration, and high-quality printing across text, audio, picture book, and video formats.

"GAP brings together advanced AI tools, agents, and models into a unified, secure database with multi-layer meta tagging," said Ravi Sharma, President of the IIT Alumni Council. "Open-source models like Llama are trained on this database, with proprietary tools like the IIT Sans font enabling seamless content generation in text, audio, and video formats. Forum Publisher, GAP's front end, integrates cybersecurity safeguards and AI tools to ensure quality and reliability."

Proven Success and Ambitious Goals

During the beta phase, GAP delivered several notable works in record time: How to Be on Top by Being in Bliss Forever by IIT Kanpur alumnus Gyanesh Choudhry was completed in under eight months, Unbridled ... the Garcha Way in four months, and Ayurveda Revisited by Dr. Shantaram Kane in the same timeframe. The first Forum series book, Accelerate Your Journey, was released in under two months, while Monetise Your Research took less than a month. GAP now targets reducing production time for OTT video episodes from three months and \$1 million to just three weeks and \$100,000.

"Our goal is to celebrate and preserve the transformative contributions of IIT Alumni with authenticity and depth," said Geetika Saigal, Convenor of the Forum Publishing Platform and Founder of Beeja House, a leading publisher of books for intellectuals. "With a bold vision to launch 100 non-fiction books in 100 weeks, GAP empowers authors and creators with multilingual tools to craft inspiring stories and dynamic OTT content for diverse audiences."

Beyond Storytelling: The Future of GAP

Looking ahead, GAP aims to integrate large language models (LLMs) to transform research into books, patents, and even physical products. "GAP goes beyond simply converting thoughts and documents into books--it redefines what books can be. For instance, it can handle bookkeeping, treating accounts as structured content for a book," said Mrinalini Gupta, Life Fellow

of the IIT Alumni Council. The GAP base stack is also being applied across other Forum platforms, such as drafting and defending patent filings through the Forum RIPM platform, as highlighted in the book Monetise Your Research. This versatility underscores GAP's transformative potential.

Maverick Effect

The Maverick Effect, authored by Harish Mehta, cofounder of NASSCOM, tells the extraordinary story of how NASSCOM laid the foundation for India's IT industry, creating an ecosystem that propelled the nation onto the global tech stage. With endorsements from iconic leaders like Nandan Nilekani, Deepak Parekh, S Ramadorai, and Rishad Premji as well as new-age changemakers like Rajan Anandan, Anupam Mittal, and Namita Thapar, the book not just became a national bestseller but also an inspiring blueprint for building transformative industries and creating lasting impact.

Forum Publishing

Forum is the mission initiative of the IIT Alumni Council which was formed with a target to create a worldwide professional services organisation of global size and stature within ten years. Forum is a collective of IIT Alumni from across one hundred city chapters around the world and is home to an intellectual and technology talent pools larger than any commercial consulting organisation anywhere. (www.forum.iitcouncil.org/publishing)

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Beeja House Launches the 100 book FORUM series by IIT Alumni Council with 'Accelerate your journey' on Climate Resilience

Delhi [India], October 2: Beeja House proudly announces the launch of 'Accelerate Your Journey', compiled and edited by Mrinalini Gupta for IIT Alumni Council. This is the first book in the FORUM series of 100 books.

"Accelerate your journey' is a comprehensive guide for countries, cities, communities, and campuses working to elevate their resilience to climate change. We, at Beeja House, are honoured to publish the 45 minute picture book that outlines the FORUM's philosophy and provides a practical framework to tackle climate change-related challenges." said Geetika Saigal, Founder of Beeja House.

"The FORUM CRP is a global advisory initiative that integrates key technologies and protocols for sustainable re-development. With a focus on promoting LiFe (Lifestyle for Environment) and LiGht (Longevity Insights for Greater Health span), the platform aims to guide communities toward a sustainable future and longer health spans - without sacrificing

the comforts and conveniences of the digital age" according to Mrinalini Gupta, who is the Media Head & Volunteer at IIT Alumni Council.

The FORUM 100 Book Series will provide a roadmap for developing frameworks and solutions that help societies remain at the forefront of sustainable progress. The FORUM CRP will serve as an advisory platform for countries, cities, communities, and campuses striving to meet climate resilience and sustainability goals. The CRP advisory consortium comprises of five leading Indian non-profit organizations: FORUM mission of IIT Alumni Council, Development Alternatives, Zero Emissions Research and Initiatives, Wellness Lifestyle Foundation, and Peermade Development Society.

"Climate resilience has been a fifty-year journey of learning and implementing for Development Alternatives. We are thrilled to contribute to this significant initiative," added Dr. Ashok Khosla, Founder and Chairperson of Development Alternatives. Dr. Khosla is a global thought leader in sustainable development.

Christina Watson of Wellness Lifestyle Foundation shared, "Jalasya and Ayushca are cutting-edge technology stacks developed with contributions from IIT Alumni start-ups. These technologies, including zero discharge, zero freshwater protocols, are foundational for building sustainable communities. These are now ready for commercial deployment."

FORUM is the professional services mission of the IIT Alumni Council. With over a hundred advisory platforms, thousands of alumni and intern participants - the AI based, born digital, mobile-ready advisory platform is configured with a high technology quotient and a unique business model to advise governments, projects, start-ups and nonprofits. FORUM aspires to become the global leader in professional services for the megasphere economy, distinguished by technology, brand, reach and scale. And success is measured by replacement of judgement by data, expensive by affordable and post-event research by proactive predictive modelling.

Earlier this year, Beeja House, (<https://beejahouse.com/>), India's first mentored publishing house, was selected as the publishing partner for three series of books to be released by the IIT Alumni Council - the largest global body of IIT alumni from 23 IITs, united in their mission to position India as a global technology leader in the emerging megasphere economy. The Council aggregates the resources of interested alumni - in terms of technology and money - to solve national challenges that threaten to impede India's ascension towards global leadership.

Designed as a 45-minute, easy-to-read photo book, "Accelerate Your Journey", the first in the series, is aimed at political leaders, corporate executives, ESG experts, potential clients, and anyone invested in sustainable progress.

Grab your copy on Amazon--<https://amzn.in/d/ieG6iCw>

(ADVERTORIAL DISCLAIMER: The above press release has been provided by ATK. ANI will not be responsible in any way for the content of the same)

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Page URL : <https://www.business-standard.com/content/press-releases-ani/beeja-house-launches-the-100-book-forum-series-by-iit-alumni-council-with-accelerate-your-journey-on>





DRDO

1 Dec 2021 · 🌐

The MoU was signed between the president of IIT Alumni Council Shri Ravi Sharma and Director General Technology Management of DRDO Shri HB Srivastava in the presence of Secretary DDR&D and Chairman DRDO Dr G Satheesh Reddy.

bl.

SUBSCRIBE



IIT Alumni Council bans Chinese systems, software in its projects

Our Bureau Updated - June 30, 2020 at 08:06 PM.

In support of the government's decision to ban Chinese apps, the IIT Alumni Council has decided to immediately put a stop to all the Chinese systems and software in its projects and initiatives.

The council has been working actively for the past few weeks with various Technical Institutes of Excellence, research institutions for developing indigenous and cost-effective solutions to replace the Chinese systems and software, it said in a statement.



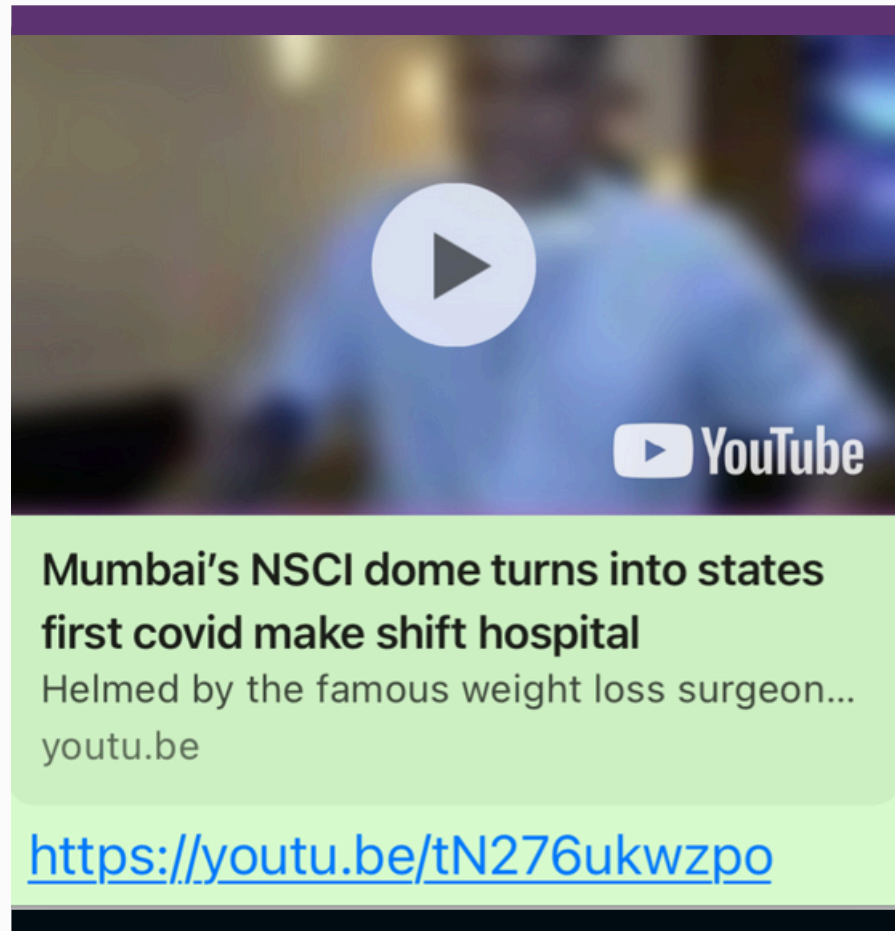
IIT Alumni Council is now the largest global body of alumni across all the 23 IITs and partnering Universities.

The IIT Alumni Council aspires to align Alumni resources towards catalysing India's technological renaissance for a digital society.

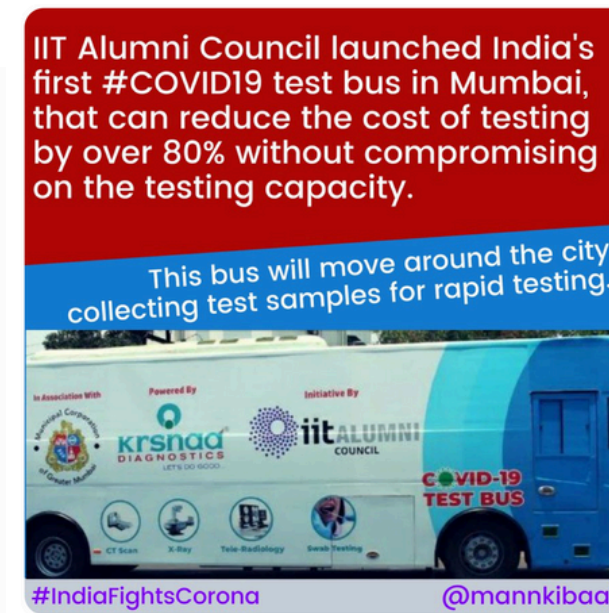
The member alumni actively participate in social ventures that are configured to solve key national challenges through the deployment of appropriate technologies using the well-proven venture capital funded start-up format.







Set up with a target outlay of Rs 700 crores, the C19 Task Force - under the chairmanship of the Dr Vijay Raghavan and Dr Arindam Bose - helped create 100 hour projects faster than anywhere in the world. NSCI Dome, led by Dr Muffi Lakadawala was one of them.



The mass genetic testing initiative of the C19 Task Force helped create cost effective indigenous testing capacity.





Mental Health of patients in particular and the home locked population in general was one of the primary challenges facing the Covid task force. To address this, the Council organised music competitions and arranged live events at the covid centres.



When the game is speed and grading is relative, there is no other technocrat group with the speed, hunger and resources of the IIT Alumni group. The virus was a competitor worthy of a fight. 27,000 alumni joined the movement.



Members of the MegaLab consortia



Diagnostic labs & Telemedicine



Digital Replica at near molecular level



Proteomics, preventive & precision medicine



Logistics and drone delivery

KOTELEO

Reversing age related degeneration



RNA therapeutics & prophylactics



Naturally occurring nano peptides

The C19 Task Force morphed into the MegaLab mission. It addresses the larger and long term challenge of preventing disease to enable active longevity. It targets those with the means to afford and ability to assess risks inherent in new cutting edge technologies.





Enabling
Active
Longevity

IIT Alumni Council implements Kodoy 3.0 indigenous technology stack to test blood samples

The Kodoy 3.0 technology stack has higher accuracy in testing of swab, blood and stool samples. Microfluidics will enable concurrent phenome testing data generation from multiple samples taken from same person at different points of time for a complete view of his health condition using most advanced technologies available, it said in a statement.

“Covid19 is not the last pandemic and the possibility of biological warfare in future is real. With a nationwide throughput of over 1 million tests per day, RT-PCR capacity is no longer a challenge. However, accuracy is a concern and usability of test data has not achieved requisite objectives in terms of prevention and management of the pandemic.

IIT Alumni Council is the largest global body of alumni, students and academicians across all the 23 IITs and partnering Institutes of the India Innovation Network (I2Net).

"Microfluidics will eventually move from MegaLab type installations to labs and finally to point of care installations such as a primary health centre or a doctor's clinic, hopefully within a few years by using learnings from the MegaLab and the development work that is going into its design and optimisation," said Shantanu Bhattacharya, a professor of IIT Kanpur and is part of IIT Alumni Council's C-19 Task Force.

IIT Alumni Council joins race to develop Covid-19 vaccine



The IIT Alumni Council has joined the race to develop a preventive vaccine for Covid-19, for which it has sanctioned an immediate ₹300 crore and expects to get an another ₹1,800 crore from its MegaFund initiative.

first dose – is said to be free of activated Covid virus or virus

cold-chain preservation, a move

ey metros.

The IIT Alumni Council is the largest global body of alumni, students and faculty, spread across all the 23 IITs and partnering Technical Institutes of Excellence (TieNet).

NEWS



"The Megalncubator aspires to reach out to any technocrat startup promoter. The innovative network incubator architecture allows a startup already registered with a home incubator to leverage additional incubators facilitating access to incremental funding, infrastructure and markets. We are using the learnings from Zone Startups India and our global partners to build a phygital incubator framework that every startup will aspire to be part of." said Mr Hemant Gupta, an IIT alumnus, MD of Zone Startups India – and head of the BFSI Research Centre. Zone Startups India manages close to 50,000 square feet of incubator space in the BSE Building in Fort, Mumbai and the Banaras Hindu University Campus.

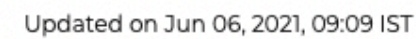
New Delhi: IIT Alumni Council announces the MegaTx initiative to identify, optimise and indigenously manufacture biotherapeutics for the treatment of C19. The Council has proposed a two stage process. The expeditious pathway will be using antibodies harvested from human plasma collected through blood donation camps that seek donors who have recovered from C19. The subsequent stage involves identification and characterisation of identified neutralising antibodies for mass production using recombinant DNA technology: i.e. to manufacture and purify the antibodies from stable, high expressing recombinant cell lines. The convalescent plasma therapy proposed at the NSCI Dome is the first step towards identifying and characterizing of antibodies for the prevention and treatment of C19. The plan is to identify and characterize the antibodies for the treatment of C19 and to manufacture the same in adequate quantity using recombinant mammalian cell lines to stably express them.

IIT Alumni Council advocates use of human-produced NAB to fight Covid-19

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“Convalescent plasma therapy is only an interim step towards administering antibodies for three reasons – the donor may have other infections, the donor may not have NABs even though he has antibodies and the donor may not have NAB in adequate quantities. We have to produce hyperimmune immunoglobulins – and that may be our fastest life saver,” he added.

1 year ago

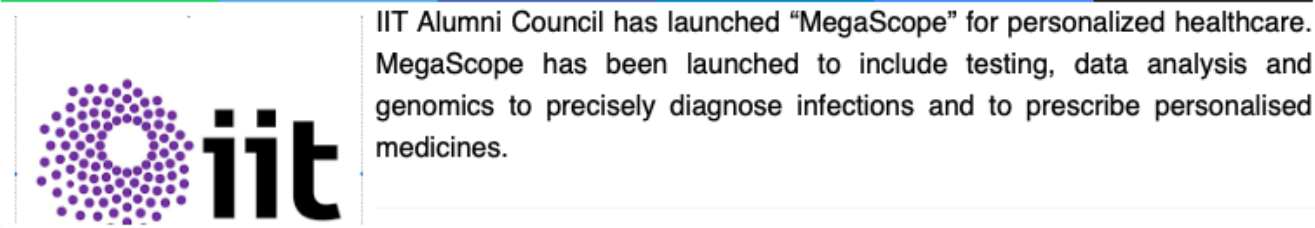


- ★ The vaccine claims to be based on indigenous technology and is expected to be preservative-free as well as 'highly efficacious'.
- ★ According to Ravi Sharma, president of the IIT Alumni Council, the objective is to deliver a 'continuously upgradable vaccine', which can 'outpace the virus', and help end the pandemic.
- ★ The press release also highlights that Rs 300 crore emergency funding has been sanctioned for the India Vaccine Stack.
- ★ The vaccine is a two-dose one which Megalab claims can prevent infection within the first few days of the first dose.
- ★ All of the 23 IITs announced their disassociation with the IIT Alumni Council last year

Megalab, an initiative of the IIT Alumni Council has announced that it is developing a fourth-generation vaccine with an 'ayurvedic adjuvant'. They claim it is India's first antigen-free, novel vaccine that is also self-limiting.

Mega Scope launched by IIT Alumni Council for personalized health care

Published: November 11, 2020



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- [What is COVID-19 Test Bus?](#)
- [About IIT Alumni Council](#)

Highlights

- MegaScope will add host genome data mapping along with Artificial Intelligence, machine learning and data backbone to the MegaLab initiative.
- The main aim of MegaScope is to improve accuracy of testing, prediction of likely disease severity and progression, enhance efficiency of treatment and avoid casualties.
- As per the president of the council, use of the same medicine for all or same test for all is coming to an end now. COVID-19 has shown that pathogens can react differently from one person to another and that is why there is a need of personalized medicine. This need will be fulfilled by MegaScope.
- The complete paradigm will be re-invented under the MegaScope initiative. Girish Mehta, a diagnostics and genetic testing expert said that RT–PCR only tests the presence of virus; it does collect any data on the human body. If host genome data is added and correlated then it will be possible to find which person requires hospitalisation, which requires quarantine, etc.

What is Mega Lab Initiative?

In July 2020, the IIT Alumni Council announced to set up a mega COVID-19 testing laboratory. The laboratory is to be set up in Mumbai. Under the initiative around 10 million RT-PCR tests are to be conducted per month.

What is COVID-19 Test Bus?

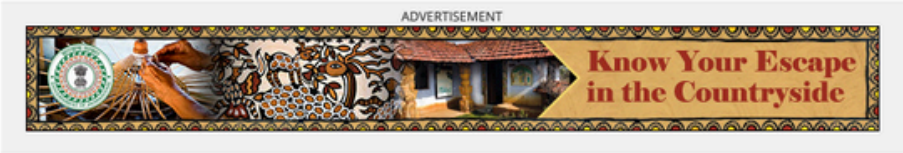
Earlier, the IIT Alumni Council launched COVID-19 test bus that were used to collect swab samples and conduct X-rays, especially in slums. The test bus was used to detect COVID-19 patients. The bus is conducting 5 million tests per month.

About IIT Alumni Council

IIT Alumni Council is the nodal global body of students, academicians and alumni, across all the 23 IITs of the country and partnering Institutes of the India Innovation Network (I2Net).

IIT Alumni Council to develop indigenous systems and software to replace banned Chinese apps

The Council believes that Indian systems and software will rise to the occasion in the global market.



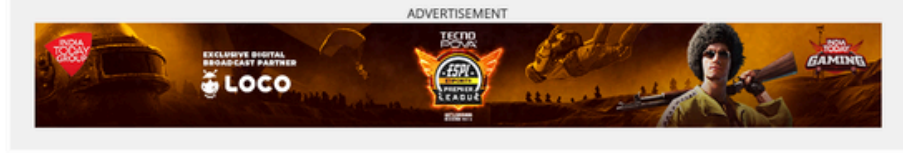
Kiran Tare [@](#)
New Delhi
June 30, 2020 · UPDATED: June 30, 2020 20:58 IST



IIT Alumni Council is the largest global body of alumni, students and faculty across all the 23 Indian Institute of Technologies (IITs) and partnering Technical Institutes of Excellence (TieNet).

The Council has been working for the last few weeks with various Technical Institutes of Excellence, research institutions for developing indigenous and cost effective solutions to replace Chinese systems and software. These include an initiative with IIT Roorkee to recycle all the plastic disposables used in the RTPCR process including viral sample tubes, sample plates and pipette tips which are consumed in large quantities adding to bio hazardous waste challenges as well as hard currency imports.

ICT Mumbai is supporting work on designing and piloting an indigenous technology line with indigenous capital goods for mass production of the RTPCR 2.0 test kits to be used in the MegaLab. "IIT Alumni Council is announcing an immediate ban on Chinese systems and software for all its initiatives including MegaLab," stated Ravi Sharma, President and Chief Volunteer of the IIT Alumni Council.



"We had already started work on indigenous development of requisite systems and software after the Prime Minister's appeal for 'Atmanirbhar Bharat'. We are very confident that we shall be able to present world class systems and software with support of the global IIT Alumni community as well as the partner Institutions like Mumbai University and ICT Mumbai that are known for their technology supremacy worldwide," he stated.

Pawan Kumar, founder of the branded IIT Alumni movement, stated he is sure that they will not only achieve the goal of self-sufficiency for all their initiatives but would also export their software and testing systems to other parts of the world. "It is well known that the Indian software industry is well geared to win in any market on a level playing field. In the current context I am more than sure that Indian software and system makers will rise to the occasion and soon present indigenous alternatives to the Indian as well as global market." **LIVE TV**

May 8, 2020

To address the need for rapid scale up of Covid19 testing in-spite of limitations in RTPCR capacity, the IIT C19 Task Force announced a Global contest among IIT alumni under the Funda Man Global Challenge series. The objective of the Funda Man Global Challenge was to define the minimum number of tests required to accurately diagnose the Covid 19 status of a group of 10,000 individuals . In short , it is to define the Pool testing algorithm and protocol for best results .

The proven and mass deployed test for Covid-19 is a genetic molecular diagnostic test carried out by RTqPCR machines. Globally, each sample is tested individually. It is however possible to mix upto ten samples into one sample using the indigenous Kodoy Technology Stack which is an open system wherein any standard RTPCR machine modified as per the stack can be programmed to work as a semi-continuous line with any compatible test kit or assay. Most commercial players offer a closed system with batch processing. A combination of pool testing with open systems holds the promise of a 100x increase in capacity of testing at a 85% lower cost for the proposed mega lab in Mumbai.

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CSIR-IGIB & IIT Alumni Council sign MoU for joint research to tackle COVID-19

The joint research by CSIR-IGIB & IIT Alumni Council will focus on catalysing the creation of an ecosystem for diagnostics and therapeutics for COVID-19 as well as flexible platforms for pandemic preparedness

By BioVoice News Desk · July 10, 2020

76 0

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By Jyoti Singh

New Delhi: Nearly all countries in the world have speed up their research efforts on novel coronavirus. In this context disease research and patient data analysis are key elements. To work on these important aspects Institute of Genomics and Integrative Biology (IGIB) and IIT Alumni Council announce a Memorandum of Understanding (MoU) for COVID-19 disease research and patient data analysis.

The joint research by CSIR-IGIB & IIT Alumni Council will focus on catalysing the creation of an ecosystem for diagnostics and therapeutics for COVID-19 as well as flexible platforms for pandemic preparedness. The ecosystem will enable an indigenous value chain with multidomain expertise spanning digital health, artificial intelligence, molecular diagnostics, next generation sequencing, antibody harvesting, and production of monoclonal antibodies.

IIT Alumni Council has handed over the first set of 8500 patient imaging data from Mumbai to IGIB, which will soon be made available in deidentified form, through a public open data platform co-hosted by IGIB and ICMR to enable research.

Both parties are viewing this partnership as an opportunity not only to create a world leading testing and treatment ecosystem in the country but also to establish global data leadership. "This would enable open data access to every scientist and innovator in the world for development of bleeding edge testing and treatment solutions. IIT Alumni Council believes that together with IGIB, we shall be able to create a robust high security Data Architecture for health Data" said Ravi Sharma, President and Chief Volunteer, IIT Alumni Council.

News IIT Alumni Council to create ₹21,000-cr social initiative fund

Our Bureau | Mumbai, June 26 | Updated On: Jun 26, 2020



The IIT Alumni Council is to create a social initiative fund of ₹21,000 crore (\$3 billion), the largest in the country, to further improve social infrastructure through deployment of innovative technology.

The mega fund will raise ₹15,000 crore from IIT alumni-controlled funds, governments, banks, corporates, global foundations and financial institutions.

It will also get ₹3,000 crore from the PanIIT Fund, a social fund launched on April 1, 2020, and another ₹3,000 crore from IIT, Mumbai University and Institute of Chemical Technology (ICT) fraternity, among others.

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ANI Press Releases

IIT Alumni Council invites startups to join the next generation banking platform under the MegaFund initiative

ANI PR
 18 May 2022 12:30 pm IST

IIT Alumni Council signs MOU with Russia for building Quantum Computers

Sumit Arora
 Published On August 28th, 2020



Indian Institute of Technology's (IIT) Alumni Council has signed an agreement with Russia's Lomonosov Moscow State University (MSU) and Russoft to build the world's largest and fastest hybrid quantum computer in India. The most promising areas for Indo-Russian joint projects are Information and Communications Technology, space exploration, climate change, quantum technology and data security.

The objective of the agreement is to use technology in the areas of healthcare, agriculture, transport and logistics, pollution and weather forecast to achieve the mission of Atma Nirbhar Bharat. As a part of the agreement, the Russian state-owned companies, which are key Intellectual Property Rights (IPR) owners, will transfer critical modules in cryogenics, cryptography and modularised cloud management technology to IIT Alumni Council.



'News without Fear or Favour'



RISE TO INCREASE

IIT Alumni Council to partner ICT Mumbai for testing of Covid-19, other diseases

June 17, 2020

June 17, 2020

New Delhi: IIT Alumni Council will partner with ICT Mumbai in the MegaLab initiative for creation of national infrastructure for testing of infectious diseases like Covid-19.

The Partnership will meet the immediate need for mass testing though reliable, faster and cheaper genetic diagnostics – in addition to becoming a showpiece for indigenous technology and engineering capability." Said Prof Anirudha Pandit, an alumnus of IIT, member of the Board of Governors of IIT Bombay and Vice Chancellor of ICT Mumbai.

IIT Alumni Council, along with partner organizations has helped rapidly deploy innovative appropriate technologies to help meet the health crisis perpetuated by the c19 pandemic. These include AI based digital x-ray systems, contactless c19 isolation centre configurations, IOT systems for virtual hospitals, pool testing algorithms for RTPCR, c19 test bus, open indigenous technology stacks for testing like Kodoy and ultracompact indigenous ultrasound scanners with portable gene sequencing so that the entire functionality of the Covid bus launched on Maharashtra Day can now be fitted in a cab. Several companies are developing 100% indigenous kits – in both liquid and solid sta

"IIT Alumni Council is very happy to welcome ICT Mumbai as its institutional partner for the MegaLab and RTPCR 2.0 initiative.The process development and technology strengths of ICT Mumbai, their alumni, students and faculty will accelerate our path to self-sufficiency and global supremacy in this field . We are very pleased to partner with eminent institutions in pursuance of our nation building agenda" said Ravi Sharma, President, IIT Alumni Council.

ICT Mumbai becomes the second institutional partner in the MegaLab initiative after Mumbai University – and will help upgrade the conventional RTqPCR kit manufacturing and testing lines to meet RTPCR2.0 targets on kit transportation and storage at room temperature, lower cost per test (through lower consumption of kit material) and per sample (through higher pooling ratio) and ability to manufacture the test kits and test kit constituents in large continuous process plants.

The GCE is an extension of the overall vision of the India Innovation Network initiative which is building a fifty-institution ecosystem to revitalise research in India



The IIT Alumni Council is setting up a Global Centre of Excellence (GCE) in IIT Ropar on Wednesday to develop India as a leading location for high science research by creating an end-to-end ecosystem with a revenue target of Rs 50,000 crores per annum and 100,000 researchers within five years. The core areas of focus will be Agritech and water under this centre with multi-disciplinary support from areas like artificial imaging, computer vision, IoT sensors, chemical engineering, nuclear physics and more.

Explaining further, Ravi Sharma, President of the IIT Alumni Council said, "The Agritech and water ecosystem being co-created along with existing research and academic institutions will lay the foundation for Agriculture 2.0. In addition to revitalising the agriculture economy, the research initiative will also help create a contract and funded research ecosystem capable of earning substantial foreign exchange."

BSE inks pact with IIT Alumni Council to encourage startups listing







SHARE FONT SIZE SAVE PRINT COMMENT

The newly-formed partnership will ensure a complete end-to-end ecosystem for the proposed social stock

In addition, it will revitalise the startup platform by attracting a wide range of venture capital and private equity funds to act as underwriters and market makers (backed by the BSE members in the front-end), it added.



1. A 79-year-old tech pioneer aims for his third startup IPO



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