

**BRIEF NOTE ON OVERALL PROGRESS MADE UNDER THE IoE SCHEME
UNDER DIFFERENT VERTICALS**



**Institute of Eminence Cell
Indian Institute of Bombay
31st March, 2022**

Social impact:

- IIT Bombay developed a simple and the fastest solution to convert Nitrogen generator to Oxygen generator to solve the Oxygen shortage during pandemic stage during May 2021.
- Team under Prof Santhosh Noronha designed a prototype of a breathing device called 'The Rebreather' which will facilitate recirculation of exhaled breath by scrubbing out Carbon dioxide and blending in fresh oxygen. This will go a long way in minimizing wastage of oxygen in the current system when hospitals are facing acute shortage during May 2021.

Research and development:

- Developed the first indigenous semiconductor memory technology to help manufacturing 180nm node in India.
- Developed a real time surveillance analysis system using AI.
- Following World Class Research Labs are being set up and these under different stages of progress.

#	WCRL Name	Budget allocated(Cr)	No of PR created	Value of PR created(Cr)	No. of PO created	Total Amount in PO(Cr)
1	Nano Science - Nano Fabrication & Characterization	260	16	61.63	10	31.30
2	Manufacturing and Materials	30	24	30.66	20	18.83
3	Health Sciences and Engineering	35	42	30.00	31	28.04
4	Data and Information Science	50	13	31.56	5	0.16
5	Sustainable Chemical Sciences	50	20	42.58	19	33.27

- Central Research Facilities: Towards augmenting central research facilities, an amount of ₹230 Cr have been earmarked for infrastructure funding. High end research equipment are being procured under this scheme. As on date 54 projects

are under various stages of completion. In this direction 121 Purchase Requisitions worth ₹184.29 Cr have been created, out of which 113 Purchase Orders worth ₹127.85 issued.

- 330 PDFs (including IPDFs) joined during the year 2021-22 and the total number of PDF reached 407.
- Total 128 patents filed during 2021-22.

Courses and interdisciplinary centers:

- An Interdisciplinary Centre for Digital Health is planned with a donation from alumni who will have strong connections with hospitals such as Tata Memorial Hospital and will undertake research to make an impact in data-driven healthcare.
- IIT Bombay is launching an IDDDP and minor program in Healthcare Informatics, starting from the academic year 2021-22. Digital Health and Informatics needs cross-functional expertise – computer science, bioinformatics, statistics, AI/ machine learning, and medical science. The program offered will be covering all this and more.
- The Senate has approved 2 academic programs, a minor and an interdisciplinary dual degree program in Healthcare Informatics, to be hosted by the center.
- The Senate approved the setting up of a Centre for Quantum Information, Science and Technology (CQuIST) at the meeting held on 17th November 2021.

Academics:

- Recruited 30 numbers of faculty during 2021-22. Total number of faculty is 698. Current student faculty ratio improved to 1:18.51

Hostels:

- The Honourable Minister of Education and Minister of Skill Development and Entrepreneurship, Government of India Mr. Dharmendra Pradhan inaugurated the new Hostel 17 at the Indian Institute of Technology Bombay campus on March 27, 2022 with 1115 rooms.

Ranking:

- QS World ranking 177 - top university from India
- NIRF: 3rd rank.

Achievements:

- IIT Bombay Professor, Prof. Roop Malik from BSBE has been elected as an associate member of the European Molecular Biology Organization.
- Established new partnership with HDFC ERGO General Insurance in the insurance sector and is aimed at operationalising high-impact projects across the insurance value chain and developing solutions to relevant business challenges with strategic business solutions.
- Shri Parag Agrawal, an alumni of IIT Bombay appointed as the CEO of Twitter.
- IIT has secured second position in the Atal Rankings of Institutions on Innovation (ARIIA) 2021 under the CFTI's category 'Institute of National Importance (Technical).
- Shri Raj Subramaniam, an alumni of IIT Bombay appointed as the CEO of FedEx.
- IIT Bombay holds the 99th position in materials science, one of five programmes at public IoE to have broken into the Top 100 positions.
- IIT Bombay's former Director Prof. Devang V. Khakkar has been selected as INAE Chair Professor for the period April 1, 2022 to March 31, 2025.
- Shri Alok Maskara, an alumni of IIT Bombay appointed as the CEO of Lennox International Inc.
- Prof. Arpita Mondal, Department of Civil Engineering, has been selected to feature in the second edition of the 'She Is' book series by the Office of Principal Scientific Adviser (PSA), Government of India, and the Red Dot Foundation featuring 75 Women in STEAM in India.

Appointment of Professors of Practice:

Following renowned industry professionals are appointed as Professor of Practice (PoPs) on full time basis for a period of 3 years.

1. Mr. Mayank Pareek, Former President of Tata Motors Passenger Vehicle division, is appointed as Professor of Practice in Shailesh J. Mehta School of Management (SJMSOM) for a period of up to 3 years.
2. Dr. Sanjay Chandra, Former Chief of R&D, Tata Steel, is appointed as Professor of Practice in the Department of Metallurgical Engineering & Materials Science (MEMS) for a period of up to 3 years.

3. Mr. Devdip Purkayastha, President of Enactus India, is appointed as Professor of Practice in Desai Sethi School of Entrepreneurship (DSSE) for a period of up to 3 years.
4. Ms. Anuradha Narasimhan, Former VP of Britannia Industries, is appointed as Professor of Practice in Desai Sethi School of Entrepreneurship (DSSE) for a period of up to 3 years.

MoUs with other Universities:

1. Total number of MoUs with international universities: 165

Library Related:

1. Total number of papers published during 2021-22: 2989
2. Total number of citation during 2021-22: 65529
3. Total number of books available: 250039
4. Total number of journals: 20917

Awards/recognition for IITB faculty members:

The following faculty members have been conferred with awards/recognition as under during the year 2021-22.

2022

Fellow of the Indian National Academy of Engineering (FNAE)

1. Prof. Arnab Dutta, Chemistry Department

Fellow of Indian Academy of Sciences (FASc)

1. Prof. Ruchi Anand, Chemistry Department
2. Samir K. Maji, Department of Biosciences and Bioengineering
3. Sunita Sarawagi, Computer Science and Engineering Department
4. Sudarshan S, Computer Science and Engineering Department

Other Fellowships

1. Prof. Subhananda Chakrabarty, Electrical Engineering Department, Fellow of the Institution of Engineering and Technology (IET), UK.
2. Prof. Narayan Rangaraj, IOR, Fellow of the Operational Research Society of India (ORSI).
3. Prof. Sunita Sarawagi, Computer Science and Engineering Department, Fellow of the Association for Computing Machinery 2021.
4. Prof. Rajkumar Pant, Aerospace Engineering Department, Fellow of The Aeronautical Society of India.

Awards

1. Prof. Debabrata Maity, Chemistry Department, has been selected for the Sun Pharma Science Foundation Research Awards 2021- Pharmaceutical Sciences.
2. Prof. Arnab Dutta, Department of Chemistry, has been selected as a member of the Indian National Young Academy of Sciences (INYNAS), for the 5-year period of 2022-2026.

Editorial Boards

- Prof. Rashmi Gupta, HSS Department, has been appointed as an Associate Editor for Humanities and Social Sciences Communication (Nature Portfolio journals).
- Prof. Manoj Keshari, Mathematics Department, has been invited to join the Editorial Board of "Proceedings - Mathematical Sciences", published by the Indian Academy of Sciences.
- Prof. Asmita Mukherjee, Physics Department, has been elected as the non-US/non-European member of the EIC user group steering committee member.
- Prof. Bhaskaran Muralidharan, Electrical Engineering Department, has been selected on the Editorial board of Materials for Quantum Technology (from the prestigious IOP Publishing).
- Prof. Niranjana Balachandran, Mathematics Department, has been invited to join the Editorial Board of "Proceedings - Mathematical Sciences", published by the Indian Academy of Sciences.
- Prof. Abhijeet Chatterjee, Chemical Engineering Department, is invited to join the editorial board of Modeling and Simulation in Material Science and Engineering (MSMSE) as a member from Dec-2021 to 2023.
- Prof. Arpita Mondal, Department of Civil Engineering, appointed as an Associate Editor of the journal Earths Future of the American Geophysical Union 2022.
- Prof. Gopal Dixit, Department of Physics, has been invited to join the youth editorial board of Ultrafast Science journal (from the prestigious Science — AAAS Publisher).