

भारतीय
प्रौद्योगिकी
संस्थान
काशी हिन्दू विश्वविद्यालय



INDIAN
INSTITUTE OF
TECHNOLOGY
BANARAS HINDU UNIVERSITY



Placement Brochure (2020-2021)

Department Of Ceramic Engineering
IIT BHU Varanasi
M.Tech Programme

Message from Director:

Greetings from Indian Institute of Varanasi and a hearty welcome to the Land of Shiva!
We are proud to be the first to pioneer degree level engineering education in undivided India almost a century ago in 1919 and by none other than our revered Bharat Ratna Mahamana Pt. Madan Mohan Malviya Ji.



The present-day institute was created after the merger of three erstwhile colleges – Banaras Engineering College, College of Mining and Metallurgy and College of Technology.

In this age of liberalization, privatization and globalization, there is an ever-increasing industry requirement for Professionals who have high employability index and required competencies with an inquisitive mind set for innovations. Our collective continuous commitments to create vibrant and technology savvy environment where excellence is the credential.

Our students imbibe all personality traits, values of the cultural city of Kashi and diversity of the BHU campus within which this Institute exists. Academic curricula not only provide the strength in their own area, but also from open electives in multiple disciplines. This uniqueness helps our students in successfully carrying out their responsibilities as a member of cross-functional team in any organization. Our excellent placement record over years speaks about the value of our students to their employers. I am confident that our students will prove their mettle and will contribute immensely towards growth and success of your organization. Looking into great achievements of the alumni of this Institute, I am sure that you and your organization is going to have a wonderful experience of intern and full-time hiring at this Institute and this relationship will go beyond for having other kind of engagements as well for mutual benefits.

I extend my deep appreciation for our industry partners who have recognized the depth of our rich and diverse talent pool and accorded valuable opportunities. I am looking forward to your visit to this campus soon.

-Prof. P K Jain

Message from Prof. In-charge:

It gives me immense pleasure to extend you a most cordial invitation to participate in the Campus Recruitment Programme of the Indian Institute of Technology (BHU), Varanasi. With an increasing thrust being placed on Institute-Industry Interaction, it is my sincere belief that your esteemed organization and IIT (BHU) Varanasi will stand to gain immensely from this symbiotic relationship.

Our Institute holds the pride of place being pioneer in the field of engineering and technical education in this country and has a glorious heritage. We have been continuously ranked amongst the elite by all peers and stakeholders. Our constant pursuit of excellence has made our institute a focal point in technical education for students and faculty members alike. Admissions to the institute take place through the reputed Joint Entrance Examination (JEE) and Graduate Aptitude Test in Engineering (GATE).

At this institute, we take utmost care to groom our students according to the needs of the industry. We seek to open frontiers of knowledge and reveal new horizons of change to broaden mindset and to create positive attitude in our students. Our students receive industrial exposure by their frequent industrial visits. Besides, our undergraduate students undergo an eight-week training during summer vacation in reputed industries/institutions/organizations (in India as well as abroad) as part of their academic requirements.



*Professor **Anil Kumar Agrawal**
Training & Placement Officer, IIT (BHU) Varanasi*

About Us:



The founder of Banaras Hindu University, Pandit Madan Mohan Malviyaji instituted a course in Ceramic Technology as early as 1924 with the noble objective of advancing glass and ceramic technology in India. In the Year 1956, Department of Glass Technology and Department of Ceramic Technology were merged to form the Department of Silicate Technology, offering a four-year degree course by injecting into its curriculum balanced engineering and scientific contents. In the year 1968 the Department was renamed as Department of Ceramic Engineering. Presently this department is unique in the country which offers B.Tech. M.Tech. and Ph.D. Programmes in the areas of Ceramic Engineering and Technology.

The Department is pursuing active research in the emerging areas of glass, glass ceramics, refractories, electronic ceramic, cement and pottery & porcelain. Research papers are being published in reputed national and international journals regularly. Considering the important role that the department of Ceramic Engineering has played, the University Grants Commission has granted funds under 'Special Assistance and COSIST' Programmes. Many R& D projects have been sponsored by AICTE, DST, CSIR and UGC. The Department celebrated its Platinum Jubilee during 1999 for 75 years of Ceramic education and organized a 'National Seminar on Challenges of 21st century.

Specializations:

Glass and Glass
Ceramics

Refractories

Cement and Advanced
building Material

Electrical and
Electronics Ceramics

Bio-Glass and Ceramics

Ceramics Composites

Faculty Profile:

Dr. Vinay Kumar Singh

vk Singh.cer@iitbhu.ac.in

Professor

Head of Department

Area of Interest: Bio-Ceramics, Cements, Dental Materials, Glass, Refractories, Metal-Ceramic Composites, Whitewares and Ceramic Coatings, Ceramic colors and frits, Abrasive products

Dr. Devendra Kumar

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Professor

Area of Interest: Materials Science: Glass, Ceramic & Glass Ceramic Technology; Electronic and Photonic Ceramics; Metal Matrix Composites

Dr. Ram Pyare

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Professor

Area of Interest: Glass Science & Technology, Ceramic Technical Analysis, Bio-ceramic.

Dr. Anil Kumar

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Associate Professor

Area of Interest: Glass Technology & Furnaces.

Dr. Kalyani Mohanta

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Associate Professor

Area of Interest: Powder Processing, Fabrication of Advanced Ceramics, Composite Materials and Cermet, Foams and Porous Materials, Cement and Building Materials, Refractories and High Temperature Materials, Non-oxide and Abrasive Materials, Material-Processing-Microstructure-Property correlation, Waste Management

Dr. Manas Ranjan Majhi

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Associate Professor

Area of Interest: Refractory Technology, Bio Ceramics, Composite Material, Porous Material & Industrial Ceramics.

Dr. Pradip Kumar Roy

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Assistant Professor

Area of Interest: Magnetic & ferroelectric ceramics, Size dependent properties of nano materials, Synthesis-structure-property correlation in materials, Refractories, Waste management.

Dr. Ashutosh Kumar Dubey

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Assistant Professor

Area of Interest: Piezoelectric Biomaterials, Functionally graded materials, Nanoporous bio ceramics, Nanomaterials, Dielectric Materials, Analytical Computation.

Dr. Akansha Dwivedi

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Assistant Professor

Area of Interest: Electronic Ceramics & composites for energy storage, multifunctional oxide electronics, multilayer Capacitors and Actuators.

Dr. Mohammad Imteyaz Ahmad

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Assistant Professor

Area of Interest: Inorganic photovoltaic materials, Composites, Material Processing.

Dr. Preetam Singh

preetamsingh.cer@iitbhu.ac.in

Assistant Professor

Area of Interest: Energy Materials, Rechargeable Battery, Fuel Cells, Hydrogen Production and Renewable Energy, Solar-Thermal Energy, Thermochemical water splitting and thermoelectric.

Dr. Santanu Das

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Assistant Professor

Area of Interest: Synthesis, Properties, and Applications of Functional Nanomaterials, including, Graphene, 2D metal-dichalcogenides, and Quantum Dots. Electrical and electrochemical properties of nanomaterials/nano-composites, Functional Nanomaterials for electronic and energy devices.

Centralized Major Research & Testing Facilities:

- Simultaneous DTA/TGA
 - DTA/TGA/DSC
 - Sputter Coating Unit Hummer 6.2
 - Surface Tension / Contact Angle Measurement DSA-10
 - FTIR Spectrometer
 - UV-visible Spectrophotometer
 - Reflection Microscope
 - Reflection/ Polarizing Transmission Microscope
 - Universal Testing Machine
 - Micro Hardness Tester
 - Grinding & Polishing
 - Vibro Energy Mill
 - ISOMET Low Speed Saw
 - Centrifugal Ball Mill
 - X-Ray Diffractometer
- STA 409 Nietzsche, Germany
Labsys SETARAM, France
LADD Research, USA
Kruss GmbH, Germany
Varian 1000, USA
SL-164, Elico, India
MPS-30, Leica, Germany
Zeiss, Germany
AGS-D Series, Shimadzu,
HMV-2000, Shimadzu,
Buehler, USA
Retsch, Germany
Buehler, USA
Retsch, Germany
Rich Seifert, Germany



Other Testing Facilities:

- INDFUR High Temp. Horizontal Electrical Furnace
- Electro Heat TM” High Temp. Controlled atmosphere cum vacuum tubular furnace
- Hummer SC-6 Sputter Coater
- NETSZ Simultaneous Thermal Analyser (up to 1550°C)
- Universal Testing Machine Transmission cum Reflecting Optical Microscopes,
- V-I Test Set Up UV-visible Spectrophotometer
- L.C.R. Meter
- Environmental Chamber
- Pilot Plant for Pottery and Glassware
- Annealing-cum-decorating Lehr
- Scanning Electron Microscope (SEM)
- Microwave Sintering Furnace
- Pin on disk friction and testing
- Millipore distillation Plant.
- Rockwell & Brinell hardness tester

Ceramic Engineering Laboratories:

- Fuel Laboratory
- Ceramic Technical Analysis Laboratory
- Electronic Ceramic Laboratory
- Pottery Laboratory
- Refractory Laboratory
- Cement Laboratory
- Ceramic Coating Laboratory
- Furnace Laboratory
- Pilot Pottery Lab
- Electro Ceramic Lab
- Material Characteration Lab/ PG Lab
- Industrial Operation Lab



IIT BHU-IRMA Centre For Excellence in Refractories

India Refractory Makers Association (IRMA) has signed an agreement with IIT-BHU, Varanasi and setting up a Centre of Excellence in Refractories at the Ceramic Department of the Institute.

Purpose and Facilities:

- IIT BHU-IRMA has built this Centre of Excellence in Refractories in alignment with the Government's **Make in India** initiative to offer independent standard testing facilities between the major, medium and small-scale industries.
- The Centre will improve the skills of employable students and other professionals through industry-focused skill development programmes.



Ongoing Sponsored Projects:

- Development of Al_2O_3 - ZrO_2 - SiO_2 refractories for glass industry

Funding Agency: IIT(BHU)- Research & Development Grant.

- Development of a high throughput processing for CIGS PV absorber films by spray pyrolysis of pre-synthesised nanoparticle ink

Funding Agency: DST-SERB Early Career Research (ECR) Award.

- A Modular Setup for I-V Characteristics Measurement of Solar Cells

Funding Agency: Center for Energy and Resource Development

- In-situ Electron Microscopy at Atomic Scale for Understanding Nucleation, Growth and Interfaces of Omega Phase

Funding Agency: DST-SERB

- Novel Electrode Materials for Reversible Alkali-ion (Li^+/Na^+) capacitors and Pseudocapacitors

Funding Agency: SERB , India

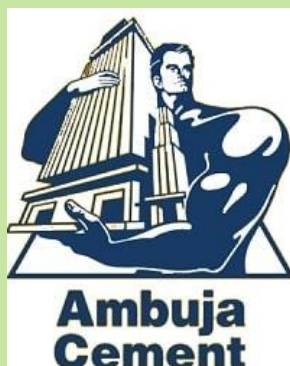
- Amplification Charge transport at the interface for supercapacitor devices

Funding Agency: CERD/DST

- Seamless Synthesis of large-area 2D transition metal di-chalcogenide semiconductors and their applications in next-generation high-performance

Funding Agency: SERB/DST

Past Recruiters:



Placement Team:

Dr. Anil Kumar Agrawal

Professor In-charge

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