



UNIVERSITY OF CALCUTTA

FACULTY ACADEMIC PROFILE/ CV



1. **Full name of the faculty member:** Dr. Debjyoti Ray
2. **Designation:** Assistant Professor
3. **Specialization:** Ceramic Engineering
4. **Contact information:**
University College of Science and Technology & Agriculture
Department of Chemical Technology, Ceramic Engineering Division
University of Calcutta
92, Acharya Prafulla Chandra Road, Kolkata-700009
Mob: 8584035465
5. **Academic qualifications:**

College/ university from which the degree was obtained	Abbreviation of the degree
University of Calcutta	B.Sc. (Chemistry Hons.)
University of Calcutta	B. Tech. (Chemical Technology)
University of Calcutta	PhD (Tech.)

6. **Positions held/ holding:** Assistant Professor

7. **Research interests:**

- Structural ceramics
- Refractories
- Industrial waste utilization
- Ferrites
- Solid state kinetics
- Advance Ceramics

8. **Research guidance:**

Number of researchers awarded M.Phil/ Ph.D degrees : NIL
Number of researchers pursuing M.Phil/ Ph.D : 3
Number of researchers awarded M. Tech. degrees: 4

9. Select list of publications:

a) *Journals: 13 (Thirteen)*

1. Effect of minor addition of quartz on phosphate based bio-porcelain ceramics. *Indoceram*. 2010, 47,
2. Kinetics of thermal decomposition of synthetic hydrogel of ZrO₂-Al₂O₃-SiO₂ system: Effect of composition. *Journal of Indian Chemical Society*, 2011,. 88, 1413-1421.
3. Non-isothermal decomposition kinetics of bayeritic bauxite. *Journal of Indian Chemical Society*. 2012, 89, 1681-1688.
4. Non-isothermal decomposition kinetics of gibbsitic bauxite from thermogravimetric data. *Interceram*. 2013, 62, 120-125.
5. Kinetics of Isothermal Dehydration Gibbsitic Bauxite. *Journal of Australian Ceramic Society*. 2014, 50, 25-35.
6. Dehydration-Rehydration Characteristics of Gibbsitic Bauxite under Equilibrium Condition. *Transaction of the Indian Ceramic society*. 2015, 73, 86-89.
7. Effect of variation of Al₂O₃: SiO₂ molar ration on microstructure and thermo-mechanical properties of electrical porcelain insulator. *Journal of Indian Chemical Society*. 2017, 94, 1-8.
8. Effect of yttria on sintering and microstructural behavior of reaction sintered mullite based on bauxite, fly ash and precipitated silica, *Ceramic International*, 2018, 44(9), 10087-10093
9. Synthesis and characterization of cordierite precursor derived by semi-colloidal sol-gel route, *Journal of Indian Chemical Society*. 2019, 96, 361-365.
10. Synthesis and characterization of sol-gel derived monophasic mullite powder, *Cerâmica*, 2020, 66(379), 307-313
11. Differences in phase, microstructural, and electrical characteristics of quartz-substituted alumina porcelain insulator, *Journal of the Australian Ceramic Society*, 2021, 57, 327-337
12. Utilization of Birbhum China clay, West Bengal for manufacturing of electrical porcelain insulators, *Journal of the Indian Chemical Society*, 2021 98, 100036
13. Effect of transition metal ion pairs doping on the dielectric properties of mullite derived by sol-gel route, *Bulletin of Materials Science*, 2024, 47 (46), 01-07

b) *Conference/ seminar volumes:*

“Synthesis and Characterization of Sol-Gel Derived Monophasic Mullite Powder”, 6th International conference on Refractories at Jamsedpur, 2019 (ICRJ 2019) Page 34.

10. Membership of Learned Societies: Indian Chemical Society, Indian Institute of Ceramics

11. Other notable activities:

- 12 years (Jan, 2005-Jan, 2016) industrial experiences in a multinational organization, A TDK group company, “EPCOS India Private Limited”. Worked as Deputy Manager.
- Coordinated orientation programme 124, conducted by UGC-HRDC, University of Calcutta