



# UNIVERSITY OF CALCUTTA

## FACULTY ACADEMIC PROFILE/ CV



1. **Full name of the faculty member:** Prabir Kumar Maiti

2. **Designation:** Asst. Professor

3. **Specialization:** Ceramic Engineering

4. **Contact information:**

Department of Chemical Technology, University of Calcutta, 92, A.P.C. Road, Kolkata  
700 009, India

Email: prabir.maiti@gmail.com

Mobile: +91 94328 89369

5. **Academic qualifications:**

College/ university from which the degree was obtained	Abbreviation of the degree
University of Calcutta	B.Sc. Hons (Chem.)
University of Calcutta	B. Tech. in Chemical Technology (Ceramic Engineering)
University of Calcutta	Ph. D. (Tech.)

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

7. **Research interests:** Ceramics, Glass and Glass Ceramics

8. **Research guidance :**

Number of researchers awarded Ph.D degrees: 3

Number of researchers awarded M. Tech. degrees: 8

Number of researchers awarded MD (Ayurvedic) degrees:

Number of researchers pursuing Ph.D : 4

9. **Projects:**

*Completed projects: 1 (UGC Major)*

*Current projects: Nil*

10. **Select list of publications:**

a) *Journals: (List attached 2010-2017)*

b) *Books/ book chapters : Nil*

c) *Conference/ seminar volumes: (List attached 2010-2017)*

d) *Other publications* : Nil

11. **Membership of Learned Societies:**

1. Indian Chemical Society
2. Indian Ceramic Society

12. **Patents:** Nil

13. **Invited lectures delivered:** Nil

14. **Awards:** Nil

15. **Other notable activities:** Industrial experience –more than 12 years

**List of Publication (2010-2019)**

**Research Articles:**

1. "Influence of fluorine content on the crystallization and microstructure of barium fluorophlogopite glass-ceramics," *Ceramics International*, 36[1], 115-120, 2010.
2. "Microstructure and densification study of natural Indian magnesite in presence of zirconia additive, *Bulletin of Material Science*, 33[4], 439-444, 2010.
3. "Some studies on nucleation, crystallization, microstructural behaviour of mica glass-ceramics in the system  $0.8\text{BaO}\cdot 0.2\text{K}_2\text{O}\cdot 0.4\text{MgO}\cdot \text{Al}_2\text{O}_3\cdot 6\text{SiO}_2\cdot 2\text{MgF}_2$ ," *Journal of Indian Chemical Society*, 88, 1509-1515, 2011.
4. Microencapsulation of Conjugated Linolenic Acid Rich Pomegranate Seed Oil by Emulsion Method, *Journal of the American Oil Chemists' Society*, 18[6], 549-558, 2012.
5. "Synthesis of dendritic polyaniline nanofibers by using soft template of sodium alginate," *Journal of Applied Polymer Science*, 123[3], 1630–1635, 2012.
6. "Influence of barium oxide on the crystallization, microstructure and mechanical properties of potassium fluorophlogopite glass-ceramics," *Ceramics International*, Vol. 38[1], 251-258, 2012.
7. "Influence of  $\text{B}_2\text{O}_3$  on crystallization behavior and microstructure of mica glass-ceramics in the system  $\text{BaO}\cdot 4\text{MgO}\cdot \text{Al}_2\text{O}_3\cdot 6\text{SiO}_2\cdot 2\text{MgF}_2$ ," *Journal of the American Ceramic Society*, 95[11], 3505-3508, 2012.
8. "SEMEDS: An important tool for air pollution bio-monitoring", *Micron*, 43[2–3], 490-493, 2012.

9. Some studies on nucleation, crystallization and microstructure and mechanical properties of mica glass-ceramics in the system  $0.2\text{BaO}\cdot 0.8\text{K}_2\text{O}\cdot 4\text{MgO}\cdot \text{Al}_2\text{O}_3\cdot 6\text{SiO}_2\cdot 2\text{MgF}_2$ , *Ceramics International*, 36[1], 2551-9, 2013.
10. Plant canopies: bio-monitor and trap for re-suspended dust particles contaminated with heavy metals, *Mitig Adapt Strateg glob change*, 19, 499–508, 2014.
11. First report of multiple metal ions containing glass–ceramic material as a heterogeneous ditopic catalyst for the chromatography free synthesis of 2-amino-3,5-dicarbonitrile-6-arylthio-pyridines in water, 56, 5094-5098, 2015.
12. Effect of strontium oxide (SrO) on the microstructure and bioactivity of melt derived bioactive silicate glass, *Journal of Indian Chemical Society*, Vol. 95, pp. 607-616, 2018.
13. Effect of yttria on sintering and microstructural behavior of reaction sintered mullite based on bauxite, fly ash and precipitated silica, pp 10087-10093, 2018.
14. Toxicity of pristine and  $\beta$ -cyclodextrin modified mesoporous alumina towards normal and cancer cell lines, *Journal of Indian Chemical Society*, Vol. 95, pp.1109-1116, 2019.
15. Pristine and modified-mesoporous alumina: molecular assistance-based drug loading and sustained release activity, *Bull. Mater. Sci.*, Vol. 43[56], 2020.
16. Influence of selenium dioxide ( $\text{SeO}_2$ ) on properties of bioglass in  $\text{SiO}_2\text{-Na}_2\text{O-CaO-P}_2\text{O}_5$  system, *Journal of the Australian Ceramic Society*, vol. 56, pp1135–1145, 2020.
17. Structure, properties and in-vitro response of  $\text{SiO}_2\text{-Na}_2\text{O-CaO-P}_2\text{O}_5$  system based glass-ceramics after partial replacement of  $\text{Na}_2\text{O}$  by  $\text{Li}_2\text{O}$ , *Journal of Non-Crystalline Solids* Vol. 556, 2021.

### Conference Paper:

1. Nucleation, crystallization, microstructure and mechanical behavior of  $0.2\text{BaO}\cdot 0.8\text{K}_2\text{O}\cdot 4\text{MgO}\cdot \text{Al}_2\text{O}_3\cdot 6\text{SiO}_2\cdot 2\text{MgF}_2$  mica glass-ceramics, International conference on Specialty glass and optical fiber, CSIR-CGCRI, Kolkata-32.
2. Nanodimensional calcium aluminate coatings on graphite for carbon containing refractory castables, 10<sup>th</sup> India International refractories congress, IREFCON-2014.
3. Kinetics of crystallization and microstructural evolution of commercial fluorophlogopite machinable glass ceramics in the system  $\text{SrO}\cdot 4\text{MgO}\cdot \text{Al}_2\text{O}_3\cdot 6\text{SiO}_2\cdot 2\text{MgF}_2$ , International conference on advances in glass science technology, 2017, CSIR-CGCRI.
4. Effect of strontium on the preparation and characterization of mica based machinable glass ceramics, *Ceramics & Advanced materials for energy and environment*, CAMEE-2015, IISc & Indian Ceramic Society.
5. Effect of SrO on the preparation and characterizations of  $\text{CaO-Na}_2\text{O-SiO}_2\text{-P}_2\text{O}_5$  based on Bioactive Glass and Glass–Ceramics, *Ceramics & Advanced materials for energy and environment*, CAMEE-2015, IISc & Indian Ceramic Society.
6. Mixed alkali ( $\text{Na}_2\text{O} + \text{Li}_2\text{O}$ ) effect on the properties of 45S5 Bioactive Glass, 81st Annual Session of Indian Ceramic Society and International Conference on "Expanding Horizons of Technological Applications of Ceramics and Glasses (EH-TACAG'17)"

7. Molecular assistance based drug loading and sustained release of amoxicillin International conference on emerging technologies for sustainable development, ICTSD'19 Govt. college of engineering and leather technology, Kolkata, Mar' 2019.