UNIVERSITY OF CALCUTTA

FACULTY ACADEMIC PROFILE/ CV

1. **Full name of the faculty member**: SUNANDA MUKHOPADHYAY
2. **Designation**: Professor (Department of Chemical Technology)
3. **Specialisation** : Ceramic Technology (Engg.)
4. **Contact information** :

(1) Residential Address: Flat A-2, Bidisha Apartment, 12E Ballygunge Station Road, Kolkata - 700019 ;
(2) Office Address : Dept. of Chemical Technology, University of Calcutta (Rajabazar campus), 92 APC Road, Kolkata – 700009.
E-mail : msunanda_cct@yahoo.co.in

6. **Academic qualifications**:
Please mention here the degrees (graduation onward):

College/ university from which the degree was obtained	Abbreviation of the degree
1) University of Calcutta	B.Sc (Hons) in Chemistry
2) University of Calcutta 3) IIT-BHU 4) Jadavpur University	B.Sc (Tech) in Ceramic Tech. M.Tech in Ceramic Engg. PhD (Engg)

7. **Positions held/ holding:**
(1) Lecturer in Ceramic Technology (1st August 1996 to 28th July 2005) at GCECT, Kolkata-10;
(2) Reader , University of Calcutta , (29th July, 2005 ; promoted later to Associate Professor);
(3) Professor, University of Calcutta, from 1st April,2012 till date . (4) Head of the Department (from 6th May, 2019: continuing)

8. **Research interests**:
(1) Refractory Castables
(2) Nanostructured Ceramics
(3) Sol-gel Science and Technology
(4) Special Glasses

9. **Research guidance** :

Number of researchers awarded M. Tech. degrees: 6
Number of researchers awarded Ph.D degrees : 1
Number of researchers pursuing M.Phil/ Ph.D : PhD = 4.

10. **Projects : 2 projects** (Funded by TEQIP – Phase II, UCT-CU, Period 1 year; 2013-14):-

Completed projects:

1) Synthesis and Characterization of Nanostructured Inorganic Oxide Based Coatings on Graphite for Application in Monolithic Refractory Ceramics
2) Evaluation of refractory performance of castables containing calcium aluminate sol-gel coatings on graphite

11. **List of publications**: **Total = 79** (National and International).

a) ***Journals:*** 56.
b) ***Books/ book chapters*** *:* 1 chapter **[** Fundamental Biomaterials : Ceramics (Elsevier Woodhead Pub.) **; Bioactive glass-ceramics** (Chapter 6) **]**
c) ***Conference/ seminar volumes***: 23.
d) ***Other publications***: ***N.A.***

Selected Papers:

1. Effect of preformed and in situ spinels on microstructures and properties of a low cement refractory castable, **Ceramics International**,30(3)369-380(2004)
2. Easy-to-use mullite and spinel sols as bonding agents in a high alumina based ultra low cement castable, **Ceramics International**, 28(7)719-729(2002)
3. Microstructures of refractory castables prepared with sol gel additives, **Ceramics International**, 29(6)671-677(2003)
4. In situ spinel bonded refractory castable in relation to coprecipitation and sol-gel derived spinel forming agents, **Ceramics International**,29(8)857-868(2003)
5. Sintering and crystallisation behaviour of chemically prepared cordierite for electronic packaging, **Ceramics International**, 30(6)1067-1070(2004)
6. Influence of gel-derived nanocrystalline spinel in a high alumina castable: Part 2, **Ceramics International**, 33(2)175-186(2007)
7. Spinel-Coated Graphite for Carbon Containing Refractory Castables, **Journal of the American Ceramic Society**., 92(8)1895-1900(2009)
8. Improved sol gel spinel ($MgAl_2O_4$) coatings on graphite for application in carbon containing high alumina castables , **J. Sol-Gel Sci. and Tech**., 56(1)66-74(2010)
9. Development of mullite and spinel coatings on graphite for improved water-wettability and oxidation resistance, **Ceramics International** , 36(6)1837-1844(2010)
10. Structural analysis on spinel ($MgAl_2O_4$) for application in spinel-bonded castables, **Ceramics International**, 35(2)381-390(2009)

11. Nanoscale calcium aluminate coated graphite for improved performance of alumina based monolithic refractory composite, **Materials Research Bulletin,** 48(7) 2583-2588(2013)
12. Fabrication and enhanced photoluminescence properties of Sm^{3+}-doped $ZnO–Al_2O_3–B_2O_3–SiO_2$ glass derived willemite glass–ceramic nanocomposites, **Optical Materials**,36(2014)1463-1470
13. Nanostructured Cementitious Sol Gel Coating on Graphite for Application in Monolithic Refractory Composites, **Ceramics International**,38(2)1717-1724(2012)
14. Improvement of the thermal characteristics of refractory castable by addition of gel route spinel nanoparticles, **Materials and Manufacturing Processes**,22(1)81-90(2007)
15. Effect of surface-treated graphites on the properties of carbon containing monolithic refractory materials – a comprehensive comparison, **International J of Appl. Ceramic Technology,** 14(4)719-730(2017).

12. **Membership of Learned Societies**:
    1. Life member of the Indian Ceramic Society.
    2. Life member of the Materials Research Society of India.
    3. Fellow of the Indian Institute of Ceramics.

13. **Patents : *N.A.***

14. **Invited lectures delivered :**
- IIT Kanpur in 'INCCOM-6' during 12-14 December, 2007 on "Recent trends in incorporating nanomaterials in refractory castables"
- CGCRI, Kolkata on "Viscosity and thermal expansion of glass" in 'Training Programme on Glasses' during 20th November--8th December, 2006.

15. **Awards :**
- Deokaran Award (2004) for best paper on 'Refractories' , Ind.Ceramic Society.
- Award for the best paper in the Regional Science Congress- at NITTTR, Kolkata, Govt. of West Bengal , Dept. of Science and Technology November,2016.

16. **Other notable activities**:
- Reviewer of referred journals on Ceramics/Materials Science (Elsevier, Springer and Wiley published);
- Editorial Advisory Board Member – Transactions of the Indian Ceramic Society (2015-16);
- Coordinated the 'Refresher Course' on Environmental Science at Academic Staff College (C.U., Rajabazar campus) during March 3-22, 2014.
- Coordinated the 'Short Term Course' on Research Methodology at UGC-Human Resource Development Centre (Academic Staff College, CU) during November 21-27, 2017.

Date:15th July, 2019