

# CURRICULUM VITAE

## PRASENJIT BARICK

### Office:

Scientist - E  
Centre for Non-Oxide Ceramics (CNOC)  
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### EDUCATION

Ph.D. (Metallurgical and Materials Engineering)	IIT Kharagpur, INDIA Thesis title: Processing and structure-property relationships of nanocrystalline silicon carbide	February, 2018
M.Tech (Ceramic Engineering)	IT-BHU, Varanasi, INDIA (Presently, IIT-BHU)	2005
B.Sc(Tech) (Ceramic Technology)	College of Ceramic Technology (University of Calcutta), Kolkata, INDIA (Presently, Govt. College of Engineering and Ceramic Technology)	2001

### WORK EXPERIENCE (Total 18 Y ; Research = 15 Y, Industry = 3 Y) (as on Sep, 2021)

Dec,2006 to present	Scientist at ARCI, Hyderabad
Jul, 2006 – Dec,2006	Assistant Manager at MISHRA DHATU NIGAM LIMITED (MIDHANI), Hyderabad
Jul, 2005 – Jun,2006	Graduate Engineer Trainee (GET) at MISHRA DHATU NIGAM LIMITED (MIDHANI), Hyderabad.
Sep, 2002 – Jun, 2003	Project Assistant at Non-oxide Ceramic division of Central Glass and Ceramic Research Institute (C.G.C.R.I.), Kolkata
Jun,2001 – Sep,2002	Site Engineer in Industrial Associates, Kolkata (Posted in Barauni oil refinery expansion project, Barauni, Bihar and Guwahati oil refinery, Guwahati, Assam)

## PRESENT RESEARCH INTEREST

- Non-oxide ceramics
- Complex shape fabrication of ceramic
- Glass based sealant for SOFC application

## ADDITIONAL RESPONSIBILITIES

- Member of internal safety audit committee
- Division coordinator for the usage of scanning electron microscope (SEM) facility (from 2017 to present).
- Member of inventory committee for three years at ARCI.
- Safety coordinator at CNOC, ARCI (from 2014 to present)
- Coordinator for rate contract procurement of chemicals at ARCI (Dec,2017 to March,2019)

## LIST OF PUBLICATIONS

- 1) S. Manivannan, P. Biswas, **P. Barick**, S. Kumari, B. P. Saha, R. Johnson, Comparative study on compaction and sintering behavior of spray and freeze granulated magnesium aluminate spinel powder, Transaction of Indian Ceramic Society, Vol. 80, No. 2, (2021), pp. 1-8.
- 2) **P. Barick\***, B.P. Saha, Effect of boron nitride addition on densification, microstructure, mechanical, thermal and dielectric properties of  $\beta$ -SiAlON ceramic, Journal of Materials Engineering and Performance, Vol.30, (2021), pp.3603-3611.
- 3) **P. Barick\***, B.V. Shalini, M. Srinivas, D.C. Jana, B.P. Saha, A facile route for producing spherical granules comprising water reactive aluminium nitride added composite powders, Advanced Powder Technology, Vol.31, No.5, (2020), pp. 2119-2127.
- 4) D.C. Jana, **P. Barick**, B.P. Saha, Effect of sintering temperature on densities and mechanical properties of solid-state sintered silicon carbide ceramics and evaluation of failure origin, Journal of Materials Engineering and Performance, Vol. 27, No. 6 (2018), 2960-2966.
- 5) S.V. Amrut Raj, D.C. Jana, **P. Barick**, B. P. Saha, Microstructure evolution in densification of SiC ceramics by aluminium vapour infiltration and investigation of mechanical properties, Ceramics International, Vol. 44, No. 8 (2018), 9221-9226.
- 6) **P. Barick\***, R. Mitra, B.P. Saha, Influence of a few important parameters on the rheological behaviour of silicon carbide nanoparticles dispersed aqueous suspension, Ceramics International, Vol. 44, No. 8 (2018), 9070-9075.
- 7) **P. Barick\***, A. Chatterjee, B. Majumdar, B.P. Saha, R. Mitra, Comparative evaluations and microstructure - mechanical property relations of sintered silicon carbide consolidated by various techniques, Metallurgical and Materials Transaction A (2018) 49(4) : 1182-1201.
- 8) **P. Barick\***, B.P. Saha, S.V. Joshi, R. Mitra, Spray-freeze-dried nanosized silicon carbide containing granules: Properties, compaction behaviour and sintering, Journal of the European Ceramic Society, 36(2016) 3863-3877.

- 9) **P. Barick\***, D. Chakravarty, B.P. Saha, R. Mitra, S.V. Joshi, Effect of pressure and temperature on microstructure and mechanical properties of spark plasma sintered silicon carbide processed with  $\beta$ -SiC nanopowder and sintering additives, *Ceramics International* 42(2016) 3836-3848.
- 10) **P. Barick\***, B.P. Saha, R. Mitra, S.V. Joshi, Effect of concentration and molecular weight of polyethylenimine on zeta potential, isoelectric point of nanocrystalline silicon carbide in aqueous and ethanol medium, *Ceramics International* 41(2015) 4289-4293.
- 11) **P. Barick\***, D.C. Jana, B.P. Saha, Load-dependent indentation behavior of  $\beta$ -SiAlON and  $\alpha$ -Silicon carbide, *Journal of Advanced Ceramics* 2 (2013) 185-192.
- 12) **P. Barick\***, D.C. Jana, N. Thiyagarajan, Effect of particle size on the mechanical properties of reaction bonded boron carbide ceramics, *Ceramics International* 39 (2013) 763-770.
- 13) I. Ganesh, N. Thiyagarajan, D.C. Jana, **P. Barick**, and G. Sundararajan, An aqueous gelcasting route to dense  $\beta$ -Si<sub>4</sub>Al<sub>2</sub>O<sub>2</sub>N<sub>6</sub>-0.5SiO<sub>2</sub> ceramics, *Journal of the American Ceramic Society*, 91 (2008) 1566 –1571.
- 14) I. Ganesh, N. Thiyagarajan, D.C. Jana, **P. Barick**, G. Sundararajan, and J.M.F. Ferreira, Dense  $\beta$ - SiAlON consolidated by a modified hydrolysis assisted solidification route, *Journal of the European Ceramic Society*, 28 (2008) 879-885.
- 15) S. Ghosh, R. Lodha, **P. Barick**, S. Mukhopadhyay, Improvement of thermal characteristics of refractory castable by addition of gel-route spinel nanoparticles, *Materials and Manufacturing processes* 22 (2007) 81-90.
- 16) **P. Barick**, R. Lodha, R. Pyare, G.N. Agrawal, Zirconia- Part II : A review of nanoparticle synthesis by Sol-Gel, *Indoceram*, Vol.41, No.3, (2004), pp. 7-11.
- 17) S. Mukhopadhyay, S. Ghosh, M.K. Mahapatra, R. Mazumder, **P. Barick**, S. Gupta, S. Chakraborty, Easy-to-use mullite and spinel sols as bonding agents in a high-alumina based ultra low cement castable, *Ceramics International* 28(2002) 719-729.

\* *Corresponding author*

## CONFERENCE PRESENTATIONS

1. Participated in two (02) days conference in International conference on Functional and Advanced Materials (ICFAM-2019), held on 09-10<sup>th</sup> December, 2019 at CSIR-NIIST, Trivandrum, Kerala
2. **Prasenjit Barick**, Bhaskar Prasad Saha, Presented a paper on 'Effect of boron carbide particles size on microstructure and mechanical properties of reaction bonded boron carbide' in 'Innovation and Technologies for Ceramics (InTec)' - 83<sup>rd</sup> annual session of Indian Ceramic Society, held on 11-12 December 2019, at NIIST, Trivandrum, Kerala, India.

3. **Prasenjit Barick**, Bhaskar Prasad Saha, “SiAlON radome for missile applications” in International Conference on Advanced Materials and Processes for Defense Application (ADMAT 2019), 23-25 September, 2019, held at Hyderabad, Telangana, India.

4. Bhaskar Prasad Saha, **Prasenjit Barick**, “Ballistic Performance of Silicon Carbide Armor” in International Conference on Advanced Materials and Processes for Defense Application (ADMAT 2019), 23-25 September, 2019, held at Hyderabad, Telangana, India.

5. Presented a poster on ‘Effect of processing parameters on the characteristics of spray - freeze - dried silicon carbide granules and its importance on the improvement of mechanical properties, in ‘81<sup>st</sup> annual session of Indian Ceramic Society and International Conference on Expanding Horizons of Technological Applications of Ceramics and Glasses (EH-TACAG’17)’, on 14 - 16 December, 2017, held at COEP, Pune, Maharashtra, India.

6. Presented a paper on ‘Microstructure, mechanical properties and Weibull modulus of reaction bonded boron carbide Ceramics’ in ‘International Conference on Ceramics (ICC-12)’ on 12-13 December, 2012, held at Bikaner, Rajasthan, India.

7. Presented a paper on ‘Application of alumina bearing sol in no cement alumina based refractory monolithics’ in ‘National seminar on recent development on monolithic refractories’ on 5 March 2005, held at IT-BHU, Varanasi, U.P. India.

8. Presented a paper on ‘Synthesis and characterization of nanozirconia powder’ in ‘68<sup>th</sup> annual session of Indian Ceramic Society’, on 21-24 December, 2004, held at BARC, Mumbai, Maharashtra, India.

9. Participated in the 15<sup>th</sup> Annual General Meeting of Materials Research Society of India (AGM-MRSI), held on 9-11<sup>th</sup> February, 2004 in IT-BHU, Varanasi.

10. Presented poster on “New additives for castable via sol-gel route” in the national seminar on Refractories & Furnaces – New options & New Values (REFUR-2000) held at CG&CRI, Kolkata during the period December 21-22, 2000.

#### **AFFILIATIONS**

Life Member	Materials Research Society of India (MRSI)
Life Member	Indian Ceramic Society (InCers)
Life Member	Sensor Research Society (SRS)

**(PRASENJIT BARICK)**