Dr. Jiten Ghosh, Scientist-F, 4 M Division (Multiscale Microstructure and Mechanics of Materials)

List of publications in SCI Journal:

1. "Effect of Alumina Diluent on the Microstructure and Electrical properties of Al_2O_3-Ti/ ZrB_2 composites prepared by Self Propagating High Temperature Synthesis Dynamic Compaction" authored by **Jiten Ghosh**, Sandip Bysakh, Santanu Sen, Suman Kumari Mishra, **Journal of Materials Engineering and Performance (2025)** https://doi.org/10.1007/s11665-025-12664-7

2. "Effect of Fly Ash and nano Silica on the formation of Calcium Silicate hydrate in Portland **cement during hydration process"** authored by Kanchan K. Kole, S. Gautham, Prosenjit Khan, Nitai Dey, Kajari Dasgupta, Ashok K. Mondal, M B Anoop, Jiten Ghosh and Saptarshi Sasmal in **Journal of Building Engineering 97 110804 (2024).**

3. **"**Atomic and micro-scale structural investigation of Bi /Cu and Bi -Cu doped BCZT dielectric properties", Kanchan Kumar Kole and Jiten Ghosh **in AIP Advances, 14, 085006 (2024)**

4. "Stepwise ordering under nano-scale confinement in thin Silica films" Subrata Pramanik, Ripan Kumar Biswas, Mrinmay Kumar Mukhopadhyay, **Jiten Ghosh**, and Alokmay Datta **in International Journal of Modern Physics B, 2540031 (2024)** [https://doi.org/10.1142/S0217979225400314]

5. **"**Ambient formation of high pressure $Ag_2Si_2O_5$ and Nonstoichiometric Ag0.3Al0.7 alloy under confinement", authored by Subrata Pramanik, Mrinmay Kumar Mukhopadhyay, Ripan Kumar Biswas, **Jiten Ghosh**, and Alokmay Datta **in AIP Advances 14, 015025 (2024). [**https://doi.org/10.1063/5.0161777].

6. "Effect of Fly Ash on the atomic scale structure of C –S – H during Portland Cement hydration**"** authored by Kanchan K. Kole, S. Gautham, Prosenjit Khan, Ripan K. +Biswas, Kajari Dasgupta, Ashok K. Mondal, M B Anoop, **Jiten Ghosh** and Saptarshi Sasmal in **Magazine of Concrete Research 75 (21) (2023) 1097-1116 [**https://doi.org/10.1680/jmacr.22.00327]

7. **"**Investigation of local structure and phase transformation in Ce-doped Barium Titanate and correlation with electrical properties", Md Sahanoor Islam and Jiten Ghosh, **Phase Transition, Vol.96, No.7, (2023) 471-481**

8. **"**Fundamental understanding of size and surface modification effects on relaxivity of Prussian blue nanocube@m-SiO2 : a novel targeted chemo-photodynamic theranostic

agent to treat colon cancer" Panchanan Sahoo, Sudip Kundu, Shubham Roy, S. K Sharma, Jiten Ghosh, Snehasis Mishra, Abhishek Mukherjee and Chandan Kumar Ghosh in **RSC Advances (2022) 12, 24555-24570.**

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11. "Confinement Creates a 9 GPa Ambience: Emergence of Cristobalite Phases in a Silica Film" S. Pramanik, J. Ghosh, D. Chanda, M. Mukhopadhyay, A, Datta **Materials Research Express (2021), 8 (6), Art No. 066403**

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Symposium/Conference Publications:

1. **"Study of atomic – level structure of cementitious Calcium Silicate Hydrate (C-S-H) in Portland Cement during hydration process",** Akkash Ali Mallick, Kanchan K. Kole, Prosenjit Khan, KajariDasgupta, Ashok Kumar Mandal, M B Anoop**,** SaptarshiSasmal and **Jiten Ghosh**, **presented** in National Conference on Ceramic and Glass Technology in the Modern Era: Challenges, Opportunities, and Sustainability (CGTME-2025)" will be organized by Indian Institute of Ceramics and Govt. College of Engineering & Ceramic Technology (GCECT), Kolkata during 8th to 9th August, 2025.

2. **"Effect of multi wall Carbon nano tube on the average and atomic scale stcructure of ordinary Portland Cement during hydration ",** Akkash Ali Mallick, Kanchan K. Kole, Prosenjit Khan, M B Anoop**, Jiten Ghosh**and Saptarshi Sasmal, presented in National Conference on Trends and Challenges in Ceramic Sector for sustainable Development and Mrittika 3.0 organized by the Department of Ceramic Engineering and InCers Student Chapter, NIT Rourkela at NIT Rourkela during 3rd to 5th April, 2025. **Page No- 49, Book of Abstract.**

3. **"Study of atomic scale structure in BCZT perovskite from laboratory based Atmoc Pair Distribution Function (APDF) using Ag radiation in a conventional XRD System", Kanchan Kumar Kole**, Amit Maiti, Santanu Sen and **Jiten Ghosh** and Saptarshi Sasmal, presented in Conference on Emerging Trends in Advanced Materials (ETAM 2025) organized by Functional Materials and Devices division, CSIR-Central Glass and Ceramic Research Institute (CGCRI), Kolkata during 6th to 7th February, 2025 at CSIR-Central Glass and Ceramic Research Institute, Kolkata
Page No- 52, Book of Abstract.

4. "**Insight into the local atomistic scale structure of C-S- H in Ordinary Portland Cement during hydrartion process", Akkash Ali Mallick**, Kanchan K. Kole, S. Gautham, Prosenjit Khan, Ashok K Mondal, Tarun K. Kayal, M B Anoop**, Jiten Ghosh** and Saptarshi Sasmal, presented in Conference on Emerging Trends in Advanced Materials (ETAM 2025) organized by Functional Materials and Devices division, CSIR-Central Glass and Ceramic Research Institute (CGCRI), Kolkata during 6th to 7th February, 2025 at CSIR-Central Glass and Ceramic Research Institute, Kolkata
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5. **"Study of short- range structural ordering in nano-structured ceramics and amorphous materials from Laboratory based Atomic Pair Distribution Function (LAPDF) in a conventional X-ray Diffractometer using Ag radiations", Jiten Ghosh** and Ripan K. Biswas, oresented in XXVII International Congress on Glass (ICG 2025) organized by CSIR-Central Glass and Ceramic Research Institute (CGCRI), Kolkata during 20th to 24th January, 2025 at Biswa Bangla Convention Centre, Newtown, Kolkata.

6. "**Use of Laboratory based Atomic Pair Distribution Function (APDF) in a conventional X-ray diffractometer using Ag radiations for the study of local atomic**

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8. "**Local structural investigations of Ca and Zr doped $BaTiO_3$ using Electron microscopy and Pair distribution Function**" Kanchan K. Kole and **Jiten Ghosh,** presented in International Conference on Advanced Materials for Better Tomorrow-II (AMBT-2023) organized by Department of Physics, BHU at Banaras Hindu University, Varanasi, UP, India during 10th to 13th October, 2023. Page **No: 179 in Book of Abstract.**

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12. **"Study of structural and dielectric properties of Zr doped Barium Titante (BZT) by X-ray Diffraction and Atomic Pair Distribution Function",** Sahanoor Islam and Jiten Ghosh, presented in one day workshop on "Advanced Energy Materials & Devices(AEMD-2022)" organized by EMDD, CSIR-Central Glass and Ceramic Research

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13. **"Formation of Non-equilibrium Alloys Through Nanocluster Deposition:The Ag0.3Al0.7 Supersaturated Alloy**" S Pramanik, J Ghosh, P Barman, S R Bhattacharyya, M K Mukhopadhyay, D. K. Chanda and A. Datta, in 2021 First International Conference on Advances in Smart Sensors, Signal Processing and Communication Technology (ICASSCT 2021) organized by the Department of Electronics, Goa University, Goa, India during 19th - 20th, March 2021.

14. *"***Indentation Size Effect in nanoindentation Behaviour of TiO_2 doped alumina**" Payel Maiti, Jiten Ghosh and Anoop Mukhopadhyay presented in National Seminar on " Propelling Innovations in Glass and Ceramics for Atmanirbhar Bharat" organized by Indian Ceramic Society, Kolkata Chapter and CSIR-CGCRI, Kolkata during 11-12th Dec., 2020. **CL-13**

15. **"Study of Short-range Structure in Sodalime Silicate Glass from Atomic Pair Distribution Function (PDF)& Near Edge X-ray Absorption Fine Structure (NEXAFS)"** Ripan K. Biswas**,**Yimin Mijiti, Smita Mukherjee, Atul Khanna, Nitin Lobo, Jiten Ghosh, Alokmay Datta and K. Muraleedharan, presented in National Seminar on " Propelling Innovations in Glass and Ceramics for Atmanirbhar Bharat" organized by Indian Ceramic Society, Kolkata Chapter and CSIR-CGCRI, Kolkata during 11-12th Dec., 2020. **CL-01**

16. *"***New approach to study local and short range structure in amorphous and nanocrystalline materials from laboratory based Pair Distribution Function using Ag radiation** "Ripan K. Biswas, Jiten Ghosh and K. Muraleedharan, presented in 10th International Student Seminar on Metallurgy and Material Science /Behind The Teacher's Desk-eBTTD 2020 organized by Indian Institute of Metals, Jamshedpur Chapter in association with Tata Steel Limited and CSIR-NML on 28th August, 2020.

17. *"***Characterization of 'Toughened Glass' by Pair Distribution Function (PDF) and NEXAFS to explain its sudden breakdown**" authored by Ripan K. Biswas, Jiten Ghosh, Konstantin Koshmak, Stefano Nannarone, Alokmay Datta, K. Muraleedharan, presented in 2nd Indian Materials Conclave and 31st AGM of MRSI organized by Material Research Society of India, Kolkata Chapter during 11th to 14th February, 2020 at CSIR-Central Glass and Ceramic Research Institute (CGCRI), Kolkata. **Poster No: CP-051 in Book of Abstract.**

18. *"*Average and Atomic-Scale Structure of Cerium doped Barium Titante (BaCei x Ti 1-x O 3 ; x=0.02, 0.1) by X-ray Diffraction and the Atomic Pair Distribution Function Technique" authored by *Sahanoor Islam, and J. Ghosh,* presented in 2nd Indian Materials Conclave and 31st AGM of MRSI organized by Material Research Society of India, Kolkata Chapter during 11th to 14th February, 2020 at CSIR-Central Glass and Ceramic Research Institute (CGCRI), Kolkata. **Poster No: CP-061 in Book of Abstract.**

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21. "Study of structural changes of Cerium doped Barium Titante (BCT) by X-ray Diffraction, Atomic Pair Distribution Function and Scanning electron microscope" authored Sahanoor Islam, and Jiten Ghosh, Presented in 12th Asia -Pacific Microscopy Conference organized by Electron Microscopy Society of India at Hyderabad International Convention Centre during 3rd - 7th February, 2020. **Page-402, Poster No – P-0100 in Book of Abstract.**

22. "Study of average and local atomic-scale structure in nanocrystalline Sr doped Barium Titanateusing Electron microscopy and Pair Distribution Function" authored Ripan K. Biswas, Jiten Ghosh and K. Muraleedharan, Presented in 12th Asia -Pacific Microscopy Conference organized by Electron Microscopy Society of India at Hyderabad International Convention Centre during 3rd - 7th February, 2020. **Page-466, Poster No – P-0102 in Book of Abstract.**

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25. "Synthesis and Characterization of Ca(OH)2 nanopowders for the restoration of Heritage Structures." authored by Dipak Kr. Chanda, Pradip S. Das, Prosenjit Khan, Netai Dey,

Jiten Ghosh[#] & Bharat Bhusan Jha & Presented in the National Conference on Recent Developments in Nanoscience & Nanotechnology (NCRDNN-2019) organized by School of Materials Science and Nanotechnology, Jadavpur University, Kolkata during 29th- 31st January, 2019. **Page-128, Abstract No – T09_33 in Book of Abstract.**

26. "Flower like Layered GO/$Mg(OH)_2$ nanocomposites and photo luminescence after adsorption of Cd^{+2} and Pb^{+2}," authored by Payel Maiti, Pradip Sekhar Das, Awadesh Kumar Mallik, Jiten Ghosh and Anoop Kumar Mukhopadyay & Presented in the National Conference on Recent Developments in Nanoscience & Nanotechnology (NCRDNN-2019) organized by School of Materials Science and Nanotechnology, Jadavpur University, Kolkata during 29th- 31st January, 2019 **Page-58, Abstract No – T02_04 in Book of Abstract**

27. "Study of Structural Transformation during Thermal Decomposition in Aluminum Hydroxide by Pair Distribution Function using Ag radiation in Laboratory XRD" authored by Ripan K. Biswas, Anoop K. Mukhopadhyay, Jiten Ghosh, K. Muraleedharan & Presented in the International Conference on Nanotechnology (ICN:31-2017) at IIT-Roorkee during 6th to 8th December, 2017 Organized by Department of Mechanical & Industrial Engineering, IIT-Roorkee, India. **Page-197, Abstract No-575 in Book of Abstract**

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30. "**Study of atomic scale structure of nanocrystalline $Ba_{0.8}Sr_{0.2}TiO_3$ as prepared by high energy ball milling using advanced X-ray based techniques and electron microscopy"** authored by Ripan Kumar Biswas, Anoop Kumar Mukhopadhyay, **Jiten Ghosh** and Muraleedharan Kuttanellore in the International Conference on Electron Microscopy and Allied Techniques and XXXVIII Annual Meeting of Electron Microscope Society of India jointly organized by Indira Gandhi Centre for Atomic Research, Kalpakkam during 17-19th July, 2017 *at Chennai, India.* **Page 394, PS-0385 in Book of Abstract**

31. "CO_2 sensing Characteristics of nano structured $BaTiO_3$ perovskite Prepared by high energy ball milling" authored by Md Sahanoor Islam, Ashim Kumar Chakraborty,

Anoop Kumar Mukhopadhyay, and Jiten Ghosh in ***Fourth International Symposium on Semiconductor Materials and Devices (ISSMD-4)*** *organized by* School of Materials Sciences & Nanotechnology, Jadavpur, at Jadavpur University, Kolkata, West Bengal, India during 8th to 10th March, 2017 **Page 156 in Book of Abstract.**

32. "Methylene Blue Degradation by 3D Self-assembly Mg $(OH)_2$ nanoparticles in presence of direct Sun light" authored by Pradip Sekhar Das, **Jiten Ghosh** and Anoop Kumar Mukhopadhyay in 2nd ***International Conference*** on Alumina and Other Functional Ceramics (AOFC-2017) organized jointly by Indian Ceramic Society & CSIR-Central Glass and Ceramic Research Institute (CGCRI), Kolkata during 15th to 17th February, 2017 at CSIR-CGCRI, Kolkata, India. **Poster No-24 in Book of Abstract.**

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34. "Nanotribological responses of Novel Biomedical Plasma Nitrided Ti6Al4V implants" authored by Anoop Mukhopadhyay, Aniruddha Samanta, **Jiten Ghosh**, Sandip Bysakh¸ Monjoy Sreemany, Ramkrishna Rane, Alphonsa Joseph, Subroto Mukherjee, Biswanath Kundu, Mitun Das in 2nd ***International Conference*** on Alumina and Other Functional Ceramics (AOFC-2017) organized jointly by Indian Ceramic Society & CSIR-Central Glass and Ceramic Research Institute (CGCRI), Kolkata during 15th to 17th February, 2017 at CSIR-CGCRI, Kolkata, India. **Poster No-11 in Book of Abstract**

35. "Synthesis of a Calcium Silicate Base Material for Endodontic Application", Nilormi Biswas, Aniruddha Samanta, **Jiten Ghosh** and Anoop Kumar Mukhopadhyay in 2nd ***International Conference*** **on Alumina and Other Functional Ceramics** (AOFC-2017) organized jointly by Indian Ceramic Society & CSIR-Central Glass and Ceramic Research Institute (CGCRI), Kolkata during 15th to 17th February, 2017 at CSIR-CGCRI, Kolkata, India. **Poster no: 14 in Book of Abstract.**

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38. "Changing the chemical activity of a biosteel by surface engineering", Aniruddha Samanta, Himel Chakraborty, **Jiten Ghosh**, Monjoy Sreemeni, Vamsi Krishna Balla, Biswanath Kundu, S. Gangadharan, Sandip Baishak, Ramkrishna Rane, Alphonsa Joseph, Subroto Mukherjee, Anoop K. Mukhopadhyay, presented in National Conference on Recent trends in functional materials in relation to Nanomaterials and Nanotechnology (RTFMNN), Kolkata organized by Department of Chemistry, St. Paul's Cathedral Mission College, Kolkata in collaboration with Indian Chemical Society, Kolkata Feb 4-5, 2016 at Department of Chemistry, St. Paul's Cathedral Mission College, Kolkata. **Page 119 in Book of Abstract.**

39. "Enhancements in Nanomechanical and Micro/Nanotribological Properties of Plasma Nitrided Austenetic Steel", H. Chakraboty, A. Samanta, M. Bhattacharya, **J. Ghosh**, M. Sreemany, S. Bysakh, R. K. Rane, A. Joseph, S. Mukherjee and A. K. Mukhopadhyay, in **International Conference on Ceramic & Advanced Materials for Energy and Environment,** 79th Annual Session of Indian Ceramic Society organized by Indian Ceramic Society, India and Materials Research Centre, Indian Institute of Science at Christ University, Bengaluru, India during 14^{th} -17^{th} December, 2015. **Page 156 (Poster 62) in Book of Abstract.**

40. "Synthesis and Characterization of Molybdenum doped Spin Coated Nanostructured V_2O_5 Thin Films", D. Mukherjee, P.S. Das, G. P. Nani, R. K. Hatale, M. Bhattacharya, D. Palai, B. Bera, J. Ghosh, A. Dey, A. K. Sharma and A. K. Mukhopadhyay, in **International Conference on Ceramic & Advanced Materials for Energy and Environment,** 79th Annual Session of Indian Ceramic Society organized by Indian Ceramic Society, India and Materials Research Centre, Indian Institute of Science at Christ University, Bengaluru, India during 14^{th} -17^{th} December, 2015. **Page 136 (Poster 30) in Book of Abstract.**

41. "Influence of crystal structure on the electrochemical properties of nano Sn powders as prepared by high energy ball milling", authored by Melvin Philips Varghese, Mathan T. Kumar, Pradip Shekar Das, Santanu Sen, Anoop Kumar Mukhopadhyay and ***Jiten Ghosh*** in ***Workshop on "Indian Innovations in Materials Research: New Materials and Processes (IIMR-15)"*** organized jointly by Indian Association for productivity, Quality and Reliability (IAPQR) & CSIR-Central Glass and Ceramic Research Institute (CGCRI), Kolkata during 25^{th} to 27^{th} June, 2015 at CSIR-CGCRI, Kolkata, India. **Page 91, A-81 in Book of Abstract.**

42. ***"***Effect of lime and rice husk ash on the structural and mechanical properties of sub-grade soil for road construction", Sandeepan Saha, ***Jiten Ghosh*** and Sankar Chakrabarti in 1^{st} ***International Conference*** on Alumina and Other Functional Ceramics (AOFC-2015)

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46. "The Study of formation mechanism of the ordered mesoporous silica from low angle X-ray scattering experiments", Sayeed Naweed Emamy, Debasis Gupta, Anoop K. Mukhopadhyay and **Jiten Ghosh** in ***First International Conference*** on "Emerging Materials: Characterization & Application EMCA-2014" organized jointly by National Institute of Technology (N.I.T)-Durgapur & CSIR-Central Glass and Ceramic Research Institute (CGCRI), Kolkata during 4th to 6th December, 2014 at CSIR-CGCRI , Kolkata India. **Page no:111 in Book of Abstract**

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