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List of Publications

International Journals:

1. Porous and highly conducting cathode material $\text{PrBaCo}_2\text{O}_{6-\delta}$: The bulk and surface studies for synthesis anomaly, **Ajay S. Bangwal**, Pardeep K. Jha, Pawan K. Dubey, Manish K. Singh, A.S.K. Sinha, Vasant Sathe, Priyanka A. Jha, and Prabhakar Singh, Physical Chemistry Chemical Physics, 21 (2019) 14701-14712.
2. Compositional effect on oxygen reduction reaction in Pr excess double perovskite $\text{Pr}_{1+x}\text{Ba}_{1-x}\text{Co}_2\text{O}_{6-\delta}$ cathode materials, **Ajay S. Bangwal**, Pardeep K. Jha, Manisha Chauhan, Sikha Singh, A.S.K. Sinha, Priyanka A. Jha, and Prabhakar Singh, International Journal of Hydrogen Energy, 05, 43, (2020) 23378-23390.
3. Catalytic behavior of $\text{Pr}_{1-x}\text{Ba}_{1+x}\text{Co}_2\text{O}_{6-\delta}$ in alkaline medium, **Ajay S. Bangwal**, Manisha Chauhan, and Prabhakar Singh, International Journal of Hydrogen Energy DOI: 10.1016/j.ijhydene.2022.02.002.
4. Comparative study of catalytic properties of $\text{PrBaCo}_2\text{O}_{6-\delta}$ and $\text{Pr}_{1.6}\text{Ba}_{0.4}\text{Co}_2\text{O}_{6-\delta}$: bulk and thin film, **Ajay S. Bangwal**, Manisha Chauhan, Prabhakar Singh (to be communicated).
5. High-temperature conduction mechanism of samarium ferrite substituted sodium niobate ceramics, Dinesh Kumar, **Ajay S. Bangwal**, Saurabh Singh, Priyanka A. Jha, and Prabhakar Singh, Physica B 582 (2020) 412028.
6. Microstructural dependent oxygen reduction reaction in Ruddlesden Popper perovskite $(\text{SmSr})\text{NiO}_{4+\delta}$, Manisha Chauhan, Pardeep K. Jha, **Ajay S. Bangwal**, Priyanka A. Jha, and Prabhakar Singh, Physical Chemistry Chemical Physics, 22 (2020) 12294.

Papers Published as Conference Proceedings:

1. Synthesis and Characterization of Cathode material $\text{Pr}_{0.6}\text{Ba}_{1.4}\text{Co}_2\text{O}_{6-\delta}$ for IT-SOFC and its comparative study with $\text{PrBaCo}_2\text{O}_{6-\delta}$, **Ajay S. Bangwal**, Priyanka A. Jha, Pardeep K. Jha and P. Singh, AIP conf. Proceedings, 2020, 2220, 140042.

National/International Conference Presentations:

1. Delivered an Invited talk at Indo-Italian workshop on **solid oxide fuel cell: evolving trends of electrode materials** held between 24-25th March 2021 organized by School of Advanced science, Vellore institute of Technology, Chennai in association with IIT, Madras and University of Roma Tor Vergata, Italy.
2. Participated in online workshop on **Rietveld Refinement** held between 22-24 September 2020 organized by UGC-DAE.
3. Participated in International Virtual conference MICTAS-2020 held between 05-06 July 2020 organized by USERC DST Dehradun.
4. Presented a poster in international e-Conference on Advanced Functional Materials and Optoelectronic Devices (ICAFMOD-2020) held during June 13-15 2020 organized by V.B.S. Paranuchal University, Jaunpur, U.P.
5. Attended national webinar series **Experimental & Computational Tools for Materials Research-ECTMR 2020** held during June 01-08 2020 jointly organized Department of Physics, Central University of Rajasthan.
6. Presented a paper in the 3rd International Conference on Condensed Matter & Applied Physics-**ICC 2019** held between October 14-15 2019 organized by Govt. Engineering College, Bikaner, Rajasthan.

7. Participated in the Gian Course on “**Fuel Cell Power Generation and Battery Storage**” held during September 16-20, 2019 organized by National Institute of Technology, Durgapur.
8. Presented a poster in the “International Conference on Functional Nanomaterials - **ICFNM- 2019**” held between February 22-25, 2019 organized by Department of Physics, IIT (BHU), Varanasi.
9. Presented a poster in First Indian Materials Conclave and 30th Annual General Meeting of MRSI-**MRSI-2019** held during February 12-15, 2019 organized by Indian Institute of Science, Bangalore.
10. Participated in two workshops on “**LaTeX for Beginners & LaTeX for thesis writing**” held on October 06th and 30th 2018 jointly organized by IEEE IAS Student Chapter and IEEE student chapter, IIT(BHU).
11. Presented a poster in National conference on Advanced materials and nanotechnology “**AMN-2018**” held during March 15-17, 2018 organized by Department of Physics and Materials science and engineering, IIIT Noida.
12. Participated in the “**Institute Day- IIT (BHU) Varanasi**” held between February 25-26, 2017 organized by Department of Physics, IIT (BHU) Varanasi.
13. Participated in International Conference on Advances in Biological Systems and Materials Science in Nano-World “**ABSMSNW**” during 19th-23rd February 2017 organized by Department of Physics, IIT (BHU) Varanasi.

