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4. **A. Gautam** and Md. Imteyaz Ahmad, Stability Landscape and Charge Compensation Mechanism for Isovalent and Aliovalent Substitution in High Entropy Oxides, edited book titles “High Entropy Materials: Fundamentals to Emerging Applications, CRC Press 13, (2024)
5. **A. Gautam** and Md. Imteyaz Ahmad, Effect of Lattice Strain on Stabilization Temperature of Calcium added (Mg, Co, Ni, Cu, Zn) O High Entropy Oxide, Ceram Int. (Accepted)
6. **A. Gautam** and Md. Imteyaz Ahmad, Stability Landscape of Aliovalent substitution on (Fe,Co,Ni,Cu,Zn)O High Entropy Oxides for Oxygen Evolution Reaction. (Submitted)
7. **A. Gautam** and Md. Imteyaz Ahmad, Strain driven distortion in Calcium added (Mg,Co,Ni,Cu,Zn)O High Entropy Oxides and its effect in Electrical properties (Submitted)

8. **A. Gautam**, Shweta, Saurabh, R Urkude, H. Verma, and Md. Imteyaz Ahmad, Electrical Properties of Flash processed (Mg, Co, Ni, Cu, Zn)O High Entropy Oxide. Journal of the European Ceramic Society, 45 (2025),117421.

Collaboration Work

1. Mohammad Muhiuddin; Naveen Bharadishettar; Naorem Aruna Devi, **Ashwani Gautam**, Sandeep Singh Chauhan, Abu Bakar Siddique, Mohammad Imteyaz Ahmad, M. N. Satyanarayan, Udaya Bhat. K., Waseem Akhtar, Neodymium doped Graphene Quantum Dots/PANI Composite for Supercapacitor Application, J. Alloys and Compounds, (2025), 178516.

International Conference Presentations

(Based on Thesis)

1. **Ashwani Gautam**, Md Imteyaz Ahmad “Low temperature synthesis and stability Landscape of entropy stabilized oxides”, Poster presentation, 76th annual technical meeting of the Indian institute of metals (IIM-ATM 2022), Hyderabad Chapter, November 13-16, Ramoji Film City, Hyderabad, India
2. **Ashwani Gautam**, Md. Imteyaz Ahmad “Low temperature synthesis and stability Landscape of Isovalent and aliovalent doped entropy stabilized oxides”, Poster presentation in international workshop on high entropy

materials (IWHEM- 2023), Bhabha atomic research centre (BARC), Mumbai, April 23-25, 2023. **(Best poster award)**

3. **Ashwani Gautam, Md. Imteyaz Ahmad** “Band gap tailoring in calcium doped high entropy oxides for enhanced photocatalysis properties.”, Poster presentation in International Conference on Advanced Ceramics (ACRDNT- 2024), Indian Institute of Technology Patna, February 15 - 17, 2024. **(Best poster award)**
4. **Ashwani Gautam, Md. Imteyaz Ahmad** “Structure and electrocatalytic response of Na/Li added (Fe,Co,Ni,Cu,Zn)O high entropy oxide.”, Oral presentation in International Conference on Advanced Ceramics for sustainability (Cera4s 2024), Indian Institute of Technology Madaras, November 28-30,2024.

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