

International Symposium on ZnO & Metal Oxides: Advances in Synthesis, Defects, and Applications (ZNOMO):

Core Topics

- Synthesis & Processing: sol-gel, hydrothermal, CVD, sputtering, pulsed laser deposition, green synthesis approaches
 - Defects & Doping: oxygen vacancies, cation substitution, interface and grain boundary engineering
 - Structural & Optical Characterization: XRD, Raman/FTIR, XPS, SEM/TEM, UV-Vis, PL, EPR
 - Electrical & Magnetic Properties: carrier transport, band gap tuning, spintronic behavior, magnetism in oxides
 - Surface Chemistry & Catalysis: adsorption, photocatalysis, gas sensing, heterogeneous catalysis
 - Device Applications: sensors, thermoelectrics, transparent conductors, varistors, memristors
 - Energy & Environment: photocatalytic degradation, water splitting (HER/OER), CO₂ reduction, supercapacitors
 - Modeling & Theoretical Insights: DFT studies, defect energetics, electronic structure, simulation-assisted design
 - Sustainable Manufacturing: low-temperature synthesis, scalability, circular economy of metal oxides
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Material Families

- ZnO
- TiO₂
- CuO / Cu₂O
- Fe₃O₄ / γ -Fe₂O₃
- CeO₂
- SnO₂
- WO₃
- NiO
- Co₃O₄
- MnO₂
- ZrO₂
- In₂O₃
- MoO₃

- V_2O_5
 - Al_2O_3
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Proposed Tracks

- Synthesis & Thin Film Growth of Metal Oxides
- Defect Engineering, Doping & Interface Control
- Optical, Electrical & Magnetic Characterization
- Catalytic and Photocatalytic Applications
- Sensors and Energy Devices Based on Metal Oxides
- Nanostructured Oxides for Environmental Remediation
- Modeling, Simulation & Theoretical Studies
- Sustainable Fabrication and Industrial Applications