1. **Cold sintering of bioactive glasses.**

2. **Additive Manufacturing of Optically Transparent Glass Structures for Next-Gen Sensing, Optical and Photonic Applications.**

3. **Upcycling of industrial waste glass into valuable components for water treatment applications.**

4. **Additive manufacturing of advanced porous and photocatalytic glass ceramic wastewater purifying membranes.**

5. **Increasing the conversion during dry reforming of methane via PLASMA CATalysis: Turning greenhouse gases into value-added products.**

6. **Nano/micro structured fluoride based luminescent materials for non-contact optical thermometry application.**

7. **Band-gap modulation of transparent conductive oxide (TCO) films by N_2 incorporation.**

8. **3D printed composites using wide-bandgap semiconductors for photocatalytic decomposition of polutants in waste water.**

9. **Near zero-thermal-quenching phosphors for NUV converted w-LEDs.**

10. **Synthesis and developing of high entropy oxide ceramic for thermal barrier application.**

11. **Development of SiN/SiC thin films by plasma-enhanced chemical vapor deposition (PECVD) technic for low-emissivity glass applications.**

12. **Development of novel bone fillers composites with enhanced bioactivity and biological response.**

13. **Fabrication of bioactive glass scaffolds with hierarchical porous structure mimicking natural bone.**

14. **Multifunctional ion-doped biopolymer-based structures enriched with mesoporous silica composites for biomedical applications.**

15. **Antimicrobial and antibiofilm activity of bioactive glass.**