

Appendix-I

List of Published Papers

A. Contributing to Thesis

1. **Verma, M.** #; Bahuguna, G. #; Shukla, S.; Gupta, R*. SnO₂ Nanoparticle-Reduced Graphene Oxide Hybrids for Highly Selective and Sensitive NO₂ Sensors Fabricated Using a Component Combinatorial Approach. *ACS Appl. Nano Mater.* **2022**, 5 (12), 19053–19061. (#equal contribution).
2. **Verma, M.** #; Bahuguna, G. #; Saharan, A.; Gaur, S.; Haick, H.; Gupta, R*. Room Temperature Humidity Tolerant Xylene Sensor Using a Sn-SnO₂ Nanocomposite. *ACS Appl. Mater. Interfaces* **2023**, 15 (4), 5512–5520. (#equal contribution).
3. **Verma, M.**; Bahuguna, G.; Singh, S.; Kumari, A.; Ghosh, D.; Haick, H.; Gupta, R*. Porous SnO₂ Nanosheets for Room Temperature Ammonia Sensing in Extreme Humidity. *Materials Horizons* **2023**.
4. Bahuguna, G. #; **Verma, M.** #; Gupta, R*. Chemical Insights into Electrophilic Fluorination of Tin Oxide Layer for Photoelectrochemical Applications. *J. Mater. Chem. A* **2021**, 9 (35), 19965–19974. (#equal contribution).
5. Bahuguna, G.; Mondal, I.; **Verma, M.**; Kumar, M.; Bhattacharya, S.; Gupta, R*; Kulkarni, G.U. Innovative Approach to Photo-Chemiresistive Sensing Technology: Surface-Fluorinated SnO₂ for VOC Detection. *ACS Appl. Mater. Interfaces*, **2020**, 12, 33.
6. Mondal, I.; Bahuguna, G.; Ganesha, M.; **Verma, M.**; Gupta, R.; Singh, A.; Kulkarni, G.U*. Scalable Fabrication of Scratch-proof Transparent Al/F-SnO₂ Hybrid Electrodes with Unusual Thermal and Environmental Stability. *ACS Appl. Mater. Interfaces*, **2020**, 12, 54203.

B. Collaborative Work

7. Dutta, P.; **Verma, M.**; Paliwal, M.; Mondal, I.; Ganesha, M.; Gupta, R*; Singh, A*; Kulkarni, G.U.* Innovative Approach to Photo-Chemiresistive Sensing Technology: Surface-Fluorinated SnO₂ for VOC Detection. *ACS Appl. Mater. Interfaces*, **2023** (In review).
8. Bahuguna, G.; Gaur, S.; Patel A.; **Verma, M.** ; Kiruthika, S.; Gupta, R*. Deciphering the Influence of Fluorine on the Electrochemical Performance of MAX and derived MXene by Selective Electrophilic Fluorination. *Materials Research Bulletin*, **2023**, 169, 112497.
9. **Verma, M.**; Bahuguna, G.; Pareek, V.; Dhamija, A.; Shukla, S.; Singh, V.; Gupta, R*. SnO₂-rGO and SnO₂-MWCNT Nanohybrids as Sensing Material for Real Time Simultaneous Detection of Heavy Metal Ions. **2023** (Manuscript under preparation)
10. Gaur, S.; **Verma, M.**; Gupta, R*. 2D-TiO₂ based Sensing Array for Room Temperature VOC Sensing. **2023** (Manuscript under preparation).

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