Dr. Tejasvinee S. Bhat

M.Sc., Ph.D.

Assistant Professor

School of Nanoscience and Technology (SNST),
Shivaji University,
Vidyanagar,
Kolhapur 416004,
Maharashtra, India
bhattejasvinee@gmail.com

PROFILE CLASSIFICATION

- ❖ Advanced functional nanomaterials
- ❖ Surface engineering of nanomaterials
- ❖ Optoelectronics

EDUCATION

- Ph. D. (Solar cell) Shivaji University, Kolhapur
- M. Sc. (Physics) Shivaji University, Kolhapur

EXPERIENCE

- July 2018–to date: Assistant Professor of Physics
  School of Nanosience & Technology, Shivaji University, Kolhapur, India.

RESEARCH AREAS/INTEREST

- Synthesis, surface modifications and interface engineering of nanoparticles for various applications.
- Synthesis, characterization and testing of various core-shell, composite nanomaterials for catalysis, energy and environmental remediation applications.

ACTIVITIES

- Attendance to various international and national conferences, webinars in India and abroad as participant.

DETAILS OF PUBLICATION

- Articles: 48
- Citations: 1005
- H-index: 19
- i-10 Index: 28

RESPONSIBILITIES

Actively working as reviewer for well-known scientific journals

- Thesis guidance and practical assistance to graduation and masters students.

PUBLICATIONS (Data until December 2023 only)

❖ List of some representative publications :

1. Kulkarni, A.A., Gaikwad, N.K., Salunkhe, A.P., Dahotre, R.M., **Bhat*, T.S.** and Patil, P.S., 2023. 2D MXene integrated strategies: A bright future for supercapacitors. Journal of Energy Storage, 71, p.107975.
2. Kulkarni, A.A., Gaikwad, N.K., Salunkhe, A.P., Dahotre, R.M., **Bhat*, T.S.** and Patil, P.S., 2023. An ensemble of progress and future status of piezo-supercapacitors. Journal of Energy Storage, 65, p.107362.
3. Kulkarni, A.A., Savekar, V.A., **Bhat*, T.S.** and Patil, P.S., 2022. Recent advances in metal pyrophosphates for electrochemical supercapacitors: A review. Journal of Energy Storage, 52, p.104986.
4. **Bhat, T.S.,** Patil, P.S. and Rakhi, R.B., 2022. Recent trends in electrolytes for supercapacitors. Journal of Energy Storage, 50, p.104222.
5. Beknalkar, S.A., Teli, A.M., **Bhat, T.S.,** Pawar, K.K., Patil, S.S., Harale, N.S., Shin, J.C. and Patil, P.S., 2022. Mn_3O_4 based materials for electrochemical supercapacitors: Basic principles, charge storage mechanism, progress, and perspectives. Journal of Materials Science & Technology, https://doi.org/10.1016/j.jmst.2022.03.036
6. **Bhat, T.,** Teli, A., Beknalkar, S., Mane, S., Tibile, P., Patil, P.S., Kim, H.J. and Shin, J.C., 2022. Activated Carbon Mediated Hydrothermally Synthesized CuO Thin Films for Electrochemical Supercapacitors. ECS

COURSES

- Mechanics
- Electricity and Magnetism
- Thermal Physics and Statistical Mechanics

AUTHOR IDS

ORCID ID
0000-0002-8966-8415

Scopus ID
55792680500

Vidwan ID
198480

Google Scholar ID
https://scholar.google.com/citations?user=-3LDeJIAAAAJ&hl=en

Journal of Solid State Science and Technology, https://doi.org/10.1149/2162-8777/ac7074

7. **Bhat, T.S.**, Shinde, A.V., Alat, A.A. and Patil, P.S., 2022. Nanoarchitectonics of hierarchical PbS material for all-solid-state asymmetric supercapacitor. Journal of Materials Science: Materials in Electronics, 33(13), pp.10368-10378.
8. Teli, A.M., Beknalkar, S.A., Mane, S.M., **Bhat, T.S.,** Kamble, B.B., Patil, S.B., Sadale, S.B. and Shin, J.C., 2022. Electrodeposited crumpled MoS_2 nanoflakes for asymmetric supercapacitor. Ceramics International, https://doi.org/10.1016/j.ceramint.2022.04.208
9. **Bhat, T.S.,** Jadhav, S.A., Beknalkar, S.A., Patil, S.S. and Patil, P.S., 2022. MnO_2 core-shell type materials for high-performance supercapacitors: A short review. Inorganic Chemistry Communications, p.109493.
10. Teli, A.M., **Bhat, T.S.,** Beknalkar, S.A., Mane, S.M., Chaudhary, L.S., Patil, D.S., Pawar, S.A., Efstathiadis, H. and Shin, J.C., 2022. Bismuth manganese oxide based electrodes for asymmetric coin cell supercapacitor. Chemical Engineering Journal, 430, p.133138.
11. Deshpande, S.V., Bhiungade, R.A., Deshpande, M.P., Pawar, K.K., **Bhat, T.S.,** Kulkarni, S.K. and Sheikh, A.D., 2021. Rapid detoxification of polluted water using ultrastable TiO2 encapsulated CsPbBr3 QDs in collected sunlight. Materials Research Bulletin, 142, p.111433.
12. Patil, S.S., **Bhat, T.S.,** Teli, A.M., Beknalkar, S.A., Dhavale, S.B., Faras, M.M., Karanjkar, M.M. and Patil, P.S., 2020. Hybrid solid state supercapacitors (HSSC's) for high energy & power density: an overview. Engineered Science, 12(4), pp.38-51.
13. **Bhat, T.S.,** Mali, S.S., Patil, J.V., Killedar, S.T., Desai, T.R., Patil, A.N., Hong, C.K., Dongale, T.D. and Patil, P.S., 2020. Nanogranular Cadmium Sulfoselenide Thin

Films Grown by Successive Ionic Layer Adsorption and Reaction Method for Optoelectronic Applications. *physica status solidi (a)*, *217*(15), p.2000002.

14. Pawar, K.K., Chaudhary, L.S., Mali, S.S., **Bhat, T.S.,** Sheikh, A.D., Hong, C.K. and Patil, P.S., 2020. In_2O_3 nanocapsules for rapid photodegradation of crystal violet dye under sunlight. *Journal of colloid and interface science*, *561*, pp.287-297.
15. Sakhare, P.A., Pawar, S.S., **Bhat, T.S.,** Yadav, S.D., Patil, G.R., Patil, P.S. and Sheikh, A.D., 2020. Magnetically recoverable $BiVO_4/NiFe_2O_4$ nanocomposite photocatalyst for efficient detoxification of polluted water under collected sunlight. *Materials Research Bulletin*, *129*, p.110908.
16. **Bhat, T.S.,** Mali, S.S., Sheikh, A.D., Tarwal, N.L., Korade, S.D., Hong, C.K., Kim, J.H. and Patil, P.S., 2018. ZnS passivated PbSe sensitized TiO_2 nanorod arrays to suppress photocorrosion in photoelectrochemical solar cells. *Materials Today Communications*, *16*, pp.186-193.
17. **Bhat, T.S.,** Shinde, A.V., Devan, R.S., Teli, A.M., Ma, Y.R., Kim, J.H. and Patil, P.S., 2018. Structural and electrochemical analysis of chemically synthesized microcubic architectured lead selenide thin films. *Applied Physics A*, *124*(1), pp.1-7.
18. **Bhat, T.S.,** Mali, S.S., Sheikh, A.D., Korade, S.D., Pawar, K.K., Hong, C.K., Kim, J.H. and Patil, P.S., 2017. TiO_2/PbS/ZnS heterostructure for panchromatic quantum dot sensitized solar cells synthesized by wet chemical route. *Optical Materials*, *73*, pp.781-792.
19. Phaltane, S.A., Vanalakar, S.A., **Bhat, T.S.,** Patil, P.S., Sartale, S.D. and Kadam, L.D., 2017. Photocatalytic degradation of methylene blue by hydrothermally synthesized CZTS nanoparticles. *Journal of Materials Science: Materials in Electronics*, *28*(11), pp.8186-8191.

20. **Bhat, T.S.,** Mali, S.S., Korade, S.D., Shaikh, J.S., Karanjkar, M.M., Hong, C.K., Kim, J.H. and Patil, P.S., 2017. Mesoporous architecture of TiO_2 microspheres via controlled template assisted route and their photoelectrochemical properties. *Journal of Materials Science: Materials in Electronics*, *28*(1), pp.304-316.
21. **Bhat, T.S.,** Devan, R.S., Mali, S.S., Kamble, A.S., Pawar, S.A., Kim, I.Y., Ma, Y.R., Hong, C.K., Kim, J.H. and Patil, P.S., 2014. Photoelectrochemically active surfactant free single step hydrothermal mediated titanium dioxide nanorods. *Journal of Materials Science: Materials in Electronics*, *25*(10), pp.4501-4511.
22. Pawar, S.A., Devan, R.S., Patil, D.S., Burungale, V.V., **Bhat, T.S.,** Mali, S.S., Shin, S.W., Ae, J.E., Hong, C.K., Ma, Y.R. and Kim, J.H., 2014. Hydrothermal growth of photoelectrochemically active titanium dioxide cauliflower-like nanostructures. *Electrochimica Acta*, *117*, pp.470-479.