Dr. B. Filip Jones, M.Sc, Ph.D.
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Profile Qualification

I have started my career as research scholar, specializing in nanomaterial and photocatalysis. Experienced in both teaching and advanced research, with one year of teaching experience and a year as a Postdoctoral Fellow. Adept at synthesizing advanced materials and optimizing photocatalytic processes to address challenges in energy and environmental sustainability with a proven track record of innovative research and publication.

Career Objectives

To utilize my expertise in nanomaterials and photocatalysis to advance innovative solutions in environmental technology. Seeking to leverage my academic and research experience to contribute to innovative projects and collaborate with leading experts in dynamic research.

Educational Profile

Ph.D., VHNSN College (Autonomous), Madurai Kamaraj University, 2023

Dissertation topic: ***Rational Design of Nanostructured Materials for Environmental Utilization***

Guide: Dr. V. Muthuraj, Assistant Professor of Chemistry

M.Sc., VHNSN College (Autonomous), Madurai Kamaraj University, 2018

Thesis topic: *Facial preparation of MoO_3@WO_3 nanocomposite as highly efficient photocatalyst for the hexavalent chromium detoxification*

Advisor: Dr. V. Muthuraj, Assistant Professor of Chemistry

B.Sc., VHNSN College (Autonomous), Madurai Kamaraj University, 2016

Technical Skills

Laboratory:

1. Handling of UV- spectroscopy
2. PL spectroscopy
3. Tubular furnace
4. Operating Photoreactor.

Computational:

Microsoft office**,** Power point, Origin and Chemdraw.

Publications

1. **Jones BF**, Maruthamani D, and Muthuraj V. Construction of novel n-type semiconductor anchor on 2D honey comb like $FeNbO_4$/RGO for visible light drive photocatalytic degradation of norfloxacin, *J. Photochem. Photobiol. A: Chem*. 400 **(2020)** 112712. doi.org/10.1016/j.jphotochem.2020.112712
2. **Jones BF**, G. Mamba, S.A. Ansari, D. Maruthamani, V. Muthuraj T.T.I. Nkambule, Simple fabrication and unprecedented visible light response of $NiNb_2O_6$/RGO heterojunctions for the degradation of emerging pollutants in water, *New J. Chem.*, ,45 **(2021)** 22697-22713. doi.org/10.1039/D1NJ04693D
3. **Jones BF**, G. Mamba, D. Maruthamani, V. Muthuraj, Honeycomb Nb_2O_5/RGO wrapped on MoO_3 nanorods for visible light-driven degradation of sulfasalazine and ciprofloxacin in water, *Colloids Surf. A: Physicochem. Eng. Asp.* 653 **(2022)** 129836. doi.org/10.1016/j.colsurfa.2022.129836
4. **Jones BF,** G. Mamba, D. Maruthamani, V. Muthuraj, Visible light-driven photocatalytic degradation of fluoroquinolone drugs in water over plasmonic Ag/$ZnNb_2O_6$@SC_3N_4 indirect Z-scheme nanostructures, *Colloids Surf. A: Physicochem. Eng. Asp.* 674 **(2023)** 131876. doi.org/10.1016/j.colsurfa.2023.131876
5. **Jones BF,** K.M. Devi Satiya, E.R. Nagarajan, Rational design of a novel $NbVO_5$/g-C_3N_4 Z-scheme heterojunctions double improvised visible-light absorption and charge transfer for efficient photocatalytic degradation of RhB, Surfaces and Interfaces., **(2024)** 104674. doi.org/10.1016/j.surfin.2024.104674
6. M Murugalakshmi**, Jones BF**, G Mamba, D Maruthamani, V Muthuraj, Unravelling the visible light-assisted catalytic prowess of an n–n type In_2S_3/CeO_2 Z-scheme heterojunction towards organic and inorganic water pollution mitigation, *New J. Chem.* 45 **(2021)** 4046-4060. doi.org/10.1039/D0NJ04844E
7. A. Banu, **Jones BF**, V. Muthuraj, Kadarkarai Govindan, P. Senthil kumar, M. Sasikumar, M. Thamilselvan, B. Vidhya, S. Rajesh, A. Sakunthala Effect of doping nickel/cobalt ions on the structural and photocatalytic efficiency of magnesium manganese oxide materials for the environmental applications, *J. Mater. Sci.: Mater. Electron*. **(2022)** doi.org/10.1007/s10854-022-07895-6

8. S. Sountharya, **Jones BF**, V Muthuraj, S. Karuthapandian, Construction of Ternary Photocatalyst of Cu/ZnO/BN with Enrich the Photocatalytic Activity Driven by Visible Light Irradiation for Degradation of RhB-MO Mixture and Amoxicillin, J. Inorg. Organomet. Polym. Mater., 33 **(2023)** 2075–2092 doi.org/10.1007/s10904-023-02621.
9. S. Sountharya, **Jones BF**, S. Karuthapandian, Hunting of "two birds with one arrow" strategical design of Nb doped WO_3 decorated on the BN nanosheet and their enhanced photocatalytic degradation of Rose Bengal dye and Chloramphenicol drug, J. Phys. Chem. Solids 193 **(2024)** 112161. https://doi.org/10.1016/j.jpcs.2024.112161
10. K Saravanakumar, V Balakumar, **Jones BF**, V Muthuraj. A structural unique 1D-MoO_3@ 3D-WO_3 nanohybrid for stable and reusable photocatalytic conversion of hexavalent chromium in aqueous medium, *Mater. Chem. Phys.*, 267 **(2021)** 124688. doi.org/10.1016/j.matchemphys.2021.124688
11. M Dhanalakshmi, S Lakshmi Prabavathi, K Saravanakumar, **Jones BF,** V Muthuraj. Iridium nanoparticles anchored WO3 nanocubes as an efficient photocatalyst for removal of refractory contaminants (crystal violet and methylene blue). *Chem. Phys. Lett.* 745 **(2020)** 137285. doi.org/10.1016/j.cplett.2020.137285

Conferences/Seminars

- International Virtual Conference on advance chemistry and material **(ICCM-21)** organized by department of chemistry Saveetha Engineering college (Autonomous) Chennai. Construction of novel n-type semiconductor anchor on 2D honey comb like $FeNbO_4$/RGO for visible light drive photocatalytic degradation of norfloxacin, **Jones BF,** Velluchamy Muthuraj.
- International Conference on Smart Materials Chemistry **(CHEMSMAT-21)**, organized by department of chemistry, St.Joseph's College (Autonomous) Trichirappalli. Design of Nb_2O_5 decorated on rGO fabricated as heterostructure nanocatalyst used for photocatalytic degradation of SSZ. **Jones BF,** Velluchamy Muthuraj.
- International Virtual Conference on Expanding Frontiers in Chemistry **(EFC-21),** organized by department of chemistry, Arul Anandar College (Autonomous) Karumathur. Simple fabrication and unprecedented visible light response of $NiNb_2O_6$/RGO heterojunctions for the degradation of emerging pollutants in water. **Jones BF,** Velluchamy Muthuraj.

Research Guidance M.Sc. students (during PhD)

- ''Design and Synthesis of Novel Gd_2O_3 nanoparticle and its characterization'' for K. Maheshwaran (Reg No: 19APCH019).
- ''Hydrothermal fabrication of In_6S_7 nanoparticle and its characterization'' for M. Senthil Kumar (Reg No: 19APCH022).

Teaching Experience

- One year teaching experience in Sri Vidhya College of Arts & Science, Virudhunagar, Tamil Nadu 626 005.

Post Doctoral Fellow

- One year PDF in Kalasalingam University.

Awards and Honors

1. Best Oral Presentation award for the paper entitled on "Simple fabrication and unprecedented visible light response of $NiNb_2O_6$/RGO heterojunctions for the degradation of emerging pollutants in water'' presented in oral session in the International Virtual Conference on Expanding Frontiers in Chemistry **(EFC-21).**

Personal Particulars

Date of Birth	04. 11. 1995
Gender	Male
Marital status	Married
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Languages Known	English, Tamil
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References

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Declaration

I hereby declare that the above-mentioned particulars are true to the best of my knowledge and I bear the responsibility for the correctness of the above-mentioned particulars.

Yours Sincerely,

B. Filip Jones