

CURRICULUM VITAE

PRITI SHARMA, Ph.D, MRSC.

C/o Prof. [Radek Zbořil](#)

Regional Centre of Advanced Technologies and Materials

Palacky University, 11,78371, Olomouc, Czech Republic.

E-mail: priti.sharma@mail.huji.ac.il, priti.s.ncl@gmail.com

[Google Scholar Profile](#)

<https://scholar.google.com/citations?user=TpBeXsYAAAAJ&hl=en>

Membership

RSC -MRSC Membership

Member ID: 729415



Career Objective & Approach

Seeking a growth-oriented position to utilize my experience and skills in multidisciplinary applied research and development precisely based - Plasmonic energy storage Material science & Photo-catalysis for H₂ Generation and CO₂ Transformation and organic transformation.

Work Experience

Jul. 2018 - till now

Junior Researcher,

RCPTM Palacký
University, Olomouc,
Czech Republic.

Supervisor: Prof. Radek Zbořil

Topic of Research:

Patent Targeted Synthesis:

Plasmonic Material (TiN): Exploring TiN heterojunction with potential photocatalyst (C₃N₄, nonmetal doped C₃N₄, C₃N₅, C₃N₇, N doped graphene) for metal-free plasmonic hot electrons concentration for H₂ generation and CO₂ absorption and conversion.

Single-atom catalysts (SACs): Uniform stable single-atom formulation pseudo single atoms and sub-nanometer synthesis over C₃N₄ nanosheet, g-C₃N₄, C₃N₅, C₃N₇ and N-doped graphene. Photocatalysis, nanomaterial.

Single-atom Alloys (SAAs): Bimetallic single atom formulation with a higher % of single atom existence photoactive materials such as TiN, (C₃N₄, nonmetal doped C₃N₄, C₃N₅, C₃N₇, N doped graphene).

Patent Targeted Application:

CO₂ Conversion: Value-added component conversion; ethanol, methanol, methane under photochemical environment. *CO₂ Capture:* Under pressure free in ionic liquid and amines synthesizing potential ionic solvents for CO₂ capture. Negative Carbon footprints.

Blue H₂ Generation: Photocatalytic H₂ evolution, Hydrogen Storage via Hydrogen Carriers substrates; water splitting – H₂O-methanol system,

Artificial photosynthesis. Establishment of Carbon capture technology during the process.

No. of students supervised: 1 Master. 1 Ph.D.

Mar. 2016 - June 2018

Supervisor: Prof. Yoel Sasson

Postdoctoral Fellow,
Hebrew University,
Jerusalem, Israel.

The topic of Research: H₂ generation via photochemical intensification. Hydrocracking, Catalyst synthesis, biofuel synthesis, Photocatalysis, Photocatalytic hydrogen generation using formate solution, Air, water purification, C-H Activation photochemically, (dye & heavy metal removal).

No. of students supervised: 1 Master.

Apr. 2015 - February 2016

Supervisor: Dr. A. P. Singh

Research Associate,
CSIR-NCL, Pune, India.

The topic of Research: Ligand via click reaction, Heterogeneous catalysis, Asymmetric catalysis, Homo and hetero Catalysis, Organometallic chemistry “**click**” Reaction modifications.

No. of students supervised: 2 M.tech, 6 Masters.

Education Profile

Aug. 2009 – April 2015

Doctoral research (Ph.D.), CSIR-NCL, Pune, India

Title: *"Immobilization of metal complexes (Pd, Mn) over mesoporous materials: Synthesis Characterization and application for oxidation, Hydrogenation, and C-C coupling reactions."*

Supervisor: Dr. A. P. Singh, Chief Scientist, (chairman) CSIR-NCL, Pune.

Strength Project:

CSIR- NCL, Pune on a DST sponsored project.

“Asymmetric organic transformations using heterogenized chiral complexes over organo-functionalized solid materials.” (GAP 276826) from 23rd June, 2009 to 30th April, 2012.

Published/Invited Cover pages in Published Journals

- ✓ First Author: Published in Small, is among our most downloaded papers. ***Carbon Nitride-Based Ruthenium Single Atom Photocatalyst for CO₂ Reduction to Methanol.***
- ✓ **Small 2022, 18, 2201712.** This article also appears in Hot Topic: ***Carbon Dioxide.***
- ✓ Front cover page ***Solar RRL***, Volume 5, Issue 7. 2021.
- ✓ Front Cover page ***ACS Sustainable Chem. Eng.*** 2020, Volume 8, Issue 6.
- ✓ Cover page ***Green Chemistry Journal*** 2018, Issue Dec.
- ✓ Invited Cover page ***Green Chemistry Journal***, 2017, issue19.
- ✓ Cover page in ***Catalysis Science and Technology Journal*** 2018, issue 13.

PI Grant awarded

- ✓ **Winner of MSCA Fellowship** - POLONEZ BIS project PLSMNSNGLTM-A no. 2022/47/P/ST4/03412.
Project title : “*Simple methods for the synthesis of future, unconventional plasmonic materials with mono-atom and bimetallic centers for sustainable H₂ production and CO₂ reduction*”.
- ✓ National Post-Doctoral Fellowship (N-PDF) Science & Engineering Research Board (SERB) India **15-Jan-2016.**

- ✓ **The project titled "Immobilization of Iridium organometallics: Homogeneous model compounds and catalytic utility in glycerol conversion to value-added product lactic acid".**
 - ✓ **Applied MSCA-IF** three times and scored more than 89%.
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Fellowships Awarded

- ✓ Awarded **Senior Research Fellowship (UGC) 2011**, Govt. of India.
 - ✓ Awarded Junior Research Fellowship (**JRF**) **2008**, Govt. of India (Out of 8056 candidates).
 - ✓ Awarded **GATE 2009** (Percentile: 89.45, All India rank **701**) conducted by Indian Institute of Technology, Delhi, Govt. of India. (Out of 574448 candidates).
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PI Project Applied.

- ✓ Joint call for bilateral projects with a solution period of 2024-2025 bilateral partner: Germany. PI- Priti Sharma.
 - ✓ Leverhulme Trust which is a UK- based sponsor on research. -Title - Carbon-capture using carbon nitride (g-C₃N₄) nanomaterials for enhanced algal growth and fuel production.
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Potential Reviewer in Well renowned Journals

- ✓ Applied Surface Science
 - ✓ Reaction Chemistry & Engineering
 - ✓ Scientific Reports
 - ✓ Applied Catalysis A: General
 - ✓ Green Chemistry
 - ✓ ACS Catalysis
 - ✓ ACS Applied Nano Material
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Patent Targeted Research Area/Interest:

Application precisely based on Green, Carbon footprint-free, environmentally friendly Photocatalysis, Plasmonic photocatalysis, nano-catalysis and catalysis in energy conversion processes. Targeted Synthesis of energy storage future materials precisely plasmonic with C, N, O based energy storage materials.

Blue Hydrogen Generation and Storage

- ✓ Pure Hydrogen carbon-free generation under photochemical reaction conditions- Using Plasmonic, photoactive material heterojunction. (Simultaneously capture CO₂ using ionic liquid and amine solution).
- ✓ In-situ hydrogen generation using IPA, various alcohols, and formats of aqueous solutions.
- ✓ Hydrogen Storage and Hydrogen Carriers Technology Innovation: Hydrogen generation by using formats solutions with photocatalysts or heterogeneous catalysts. Green and safe in-situ hydrogen generation using Mg, Al metals in water medium using photocatalyst.

CO₂ capture, storage, and transformation into value-added products

- ✓ Photochemical Organic Transformation: Value-added component conversion; ethanol, methanol, methane under a photochemical environment.
- ✓ *CO₂ Capture*: Under pressure free in ionic liquid and amines synthesizing potential solvents for CO₂ capture.
- ✓ Negative Carbon footprints industrial protocol optimization.

Patent Targeted Energy Storage Material Synthesis:

- ✓ **Metal Free-Plasmonic Material (TiN)**: Exploring TiN heterojunction with potential photocatalyst (C₃N₄, nonmetal doped C₃N₄, C₃N₅, C₃N₇) for metal-free plasmonic hot electrons concentration for H₂ generation and CO₂ absorption and conversion.

- ✓ Detailed research for plasmonic material hetero-junction capability with CN-based material for hydrogen evolution.

Single-atom catalysts (SACs):

- ✓ Highly stable, uniformly distributed single atom formulation, pseudo single atoms, and sub-nanometer synthesis over C₃N₄ nanosheet, g-C₃N₄, C₃N₅, C₃N₇, and N-doped graphene.
- ✓ Detailed research for single atom stability and over various photoactive support.
- ✓ Photo catalysis, using energy storage material precisely carbon and Nitrogen based materials.

Single-atom Alloys:

- ✓ Bimetallic single-atom formulation with a higher % of single-atom existence photoactive supports. Various alloys combination Ni-Co, Pt-Ni, Pt-Co, Fe-Zn, Co-Ni, Fe-Pt were synthesized as single-atom alloys for photochemical reactivity.
- ✓ **Phase Transfer Catalysis:** Fundamentals and Industrial Applications.
- ✓ **Metal interaction study:** metal interaction durability, materials agglomeration, Metal nanoparticle, Rusting, Metal oxide formation.
- ✓ Organic-inorganic hybrid interaction, supported metal complex based on green chemistry application.
- ✓ Multiphase Catalytic Process Development. Oxidations, Hydrogenations, Halogenations.

Photochemical Organic Transformation:

- ✓ C-H activation
- ✓ CO₂ to fuel transformation.
- ✓ Dye degradation and waste, Organic, and plastic degradation.
- ✓ Photochemical in-situ hydrogenation.
- ✓ Air, Water, and Soil purification.

Active Independent - Collaboration National / International

- ✓ **Dr Gareth Griffiths**, Principal Investigator, Algal Research, Energy and Bioproducts Research Institute Aston University, Birmingham B4, 7ET, United Kingdom, Mechanical Engineering, **Aston University, Birmingham UK.**
Collaboration research Topic. Carbon capture using carbon nitride nanomaterials for enhanced algal growth and fuel production.
<https://research.aston.ac.uk/en/persons/gareth-griffiths>
- ✓ **Dr. Abul Kalam Hossain**
Senior Lecturer, College of Engineering and Physical Sciences
Mechanical, Biomedical & Design Engineering, Aston Institute of Urban Technology and the Environment (ASTUTE); Aston Institute of Materials Research (AIMR)
Collaboration research Topic. *SANP impact over the calorific value of the fuel.*
<https://orcid.org/0000-0002-8713-8058>.
- ✓ **Dr. Gianvito Vilé Politecnico di Milano**, Via Mancinelli, 7, 20131 Milan, Italy.
<https://www.vile-researchgroup.com/>
Collaboration research Topic: Bimetallic single-atom photochemical application for key material formulation.
- ✓ **Dr. Kancharlapalli Srinivasu**, Theoretical Chemist.
Bhabha Atomic Research Centre: **Mumbai, Maharashtra, IN.**
Collaboration research Topic: C₃N₄ based First-principal investigation of electronic structures and interactions.
<https://scholar.google.co.in/citations?user=W11gYhMAAAAJ&hl=en>
- ✓ Dr. Dinesh Kanji Patel, **Carnegie Mellon University. Pittsburgh, United States.**
Collaboration research Topic: 2D and 3D Printed Material design and application.

<https://scholar.google.co.in/citations?user=2KonQvQAAAAJ&hl=en>

- ✓ Dr. Vikas Sharma; Research Associate, Mechanical Engineering, **Aston University, Birmingham UK**.
Department of Mechanical, Biomedical Engineering & Design.
Collaboration research Topic: biodiesel production study using real Engine and calorific values.
<https://scholar.google.co.in/citations?user=1pHR6QAAAAJ&hl=en>
- ✓ Dr. Sujoy Sarkar; Postdoctoral Research Fellow at **Queens College, New York**.
Collaboration research Topic: material electrochemistry, electrochemical energy conversion, storage systems.
<https://scholar.google.com/citations?user=K469vcoAAAAJ&hl=en>
- ✓ Dr. Baljeet Singh, JSPS-Fellow **Kyushu University, Fukuoka, Japan**
Direct Air Capture/Post-combustion CO₂ Capture/sustainable food/Farmer.
https://scholar.google.co.in/citations?hl=en&user=I5UxrpMAAAAJ&view_op=list_works&sortby=pubdate

Technical/Instrumental Skills

Photo reactor;

- ✓ **7 years of handing experience:** Photoreactor system handling experience consisting of the following; UV protection cabinet, Thermocontrol, Bandpass filter, spectral radiometer, and various monochromatic lamps.
- ✓ **Light sources handling:** LED immersion lamp for lamp photoreactor (275, 310, 265, 385, 395, 405 nm wavelength) handling, Nova light TLED 100/365 Basic (immersion lamp 100W, 365nm), Nova light TLED 100/420 Basic (immersion lamp 100W, 420nm), Nova light TLED 100/525 Basic (immersion lamp 100W, 525nm), 150 Watt xenon source of light, 150 Watts medium pressure light source with Hg lamp.
- ✓ **Spectral radiometers:** wireless measuring to monitor the lamp power, Spectra at peak irradiance, Peak irradiance (UVA, UVB, UVC, VIS), Irradiance dose (UVA, UVB, UVC, VIS), Irradiance profile.
- ✓ Expertise for Plasmonic and Photoactive material photo-reactivity optimization under various light source with bandpass filter.

Other Instruments Expertise

- ✓ Expertise in handling of instruments viz; XRD (Philips), FT-IR (Perkin Elmer), UV-Visible (Perkin Elmer), N₂ adsorption-desorption (Quantachrome) technique, ICP-AES, GC, GC-MS and HPLC, High-Pressure Reactors (Parr Reactor), Amar Reactor, Ultrasonic homogenizers.
- ✓ Expertise knowledge of metal interaction by XPS, in-situ EPR, Solid-state NMR, HR-XPS, SEM, Raman, HR-TEM, TGA, DTA & elemental analysis.
- ✓ Analysis of organic reaction products using analytical instruments such as GC (FID, TCD), HPLC & Development of process and Catalyst for the liquid phase organic reactions to get fine and bulk chemicals.

Computational/Software Skills

- ✓ **Computational calculation using Gaussian 09 software interaction energies in the transition states.**
- ✓ MS Office, SciFinder, Chemdraw, ImageJ, Origin.

Publications

- [1] Interface Engineering of SRu-mC₃N₄ Heterostructures for Enhanced Electrochemical Hydrazine Oxidation Reactions Authors: Ajay Munde, **Priti Sharma**, Somnath Dhawale, Ravishankar G. Kadam, Subodh Kumar, Hanumant B. Kale, Jan Filip, Radek Zboril, Bhaskar R. Sathe *, Manoj B. Gawande * **Catalysts-2000162 (IF: 4.146)**.
- [2] Intermetallic Copper-based Electride Catalyst with High Activity for C-H Oxidation and Cycloaddition of CO₂ into Epoxides. Ravishankar G. Kadam, Tian-Nan Ye, Dagmar Zaoralová, Miroslav Medved', **Priti Sharma**, Yangfan Lu, Giorgio Zoppellaro, Ondrej Tomanec, Michal Otyepka, Manoj B. Gawande, Radek Zboril and Hideo Hosono. **Small 2022, 18, 2201712. This article also appears in Hot Topic: Carbon Dioxide. (IF: 15.15)**.

- [3] Pd doped Carbonitride (Pd-g-C₃N₄): An efficient Photocatalyst for Hydrogenation via Al-H₂O system & efficient Electrocatalyst towards Overall Water Splitting. **Priti Sharma*** Sujoy Sarkar, Debdyuti Mukherjee, and Yoel Sasson*, Daniel Mandler*. (**Green chemistry Accepted, Green Chemistry, 2022, DOI: 10.1039/D2GC00801G**). (IF: 11.034).
- [4] Surface-engineered Iridium-based magnetic photocatalyst paving a path towards visible light driven C-H arylation and cyanation reaction. Pooja Rana, Rashmi Gaur, Bhawna Kaushik, Pooja Rana, Sneha Yadav, Priya Yadav, **Priti Sharma**, Manoj B. Gawande, Rakesh K. Sharma. *J. Catal.* **2021**, *401*, 297–308. (IF: 7.92).
- [5] An Earth-Abundant Ni-Based Single-Atom Catalyst for Selective Photodegradation of Pollutants. Gianvito Vilé, **Priti Sharma**, Maarten Nachtegaal, Flavio Tollini, Davide Moscatelli, Anna Sroka-Bartnicka, Ondrej Tomanec, Martin Petr, Jan Filip, Izabela S. Pieta, Radek Zbořil, Manoj B. Gawande. *Sol. RRL*, **5**: 2100176. <https://doi.org/10.1002/solr.202100176>. published with cover page. (IF: 8.13).
- [6] Carbon Nitride-Based Ruthenium Single Atom Photocatalyst for CO₂ Reduction to Methanol. **Priti Sharma**, Subodh Kumar, Ondrej Tomanec, Martin Petr, Johnny Zhu Chen, Jeffrey T. Miller, Rajender S. Varma, Manoj B. Gawande, Radek Zbořil. *Small* **2021**, *17*, 2006478, Invited cover page. (IF: 15.15).
- [7] Facile Combined Experimental & Computational Study: g-C₃N₄@PDMS Assisted Knoevenagel Condensation Reaction under Phase Transfer Conditions. **Priti Sharma**, Dinesh K Patel, Srinivasu Kancharlapalli, Shlomo Magdassi^{1,*}, Yoel Sasson^{1,*}. Accepted in *ACS Sustainable Chemistry & Engineering* **2019**. (IF:9.224)
- [8] Visible light Assisted Hydrogen Generation via Magnesium-Water system Catalyzed by Pd-g-C₃N₄ Photo catalyst. **Priti Sharma*** and Yoel Sasson. *Green Chem.*, **2019**, *21*, 261-268, published with cover page. (IF: 11.034).
- [9] Synthesis of heterogeneous Ru(II)-1,2,3-triazole catalyst supported over SBA-15: application to the hydrogen transfer reaction and unusual highly selective 1,4-disubstituted triazole formation via multicomponent click reaction. **Priti Sharma^a**, Jayant Rathod^{#c}, A.P. Singh^{*b}, Pradeep Kumar^{*c} and Yoel Sasson^{*a} *Catal. Sci. Technol.*, **2018**, *8*, 3246-3259, Selected for Cover page issue 13. (IF: 6.177)
- [10] Facile continuous process for gas phase halogen exchange over supported alkyl phosphonium salts. **Priti Sharma*** and Yoel Sasson. *RSC Advances*, **8(2018)** 2824-2828. (IF: 4.036)
- [11] Highly active Ru-g-C₃N₄ photocatalyst for visible light assisted selective hydrogen transfer reaction using hydrazine at room temperature. **Priti Sharma*** and Yoel Sasson. *Catalysis Communications*. **102 (2017)**48-52.
- [12] Highly active g-C₃N₄ as a solid base catalyst for knoevenagel condensation reaction under phase transfer conditions. **Priti Sharma*** and Yoel Sasson. *RSC Advances*. **7 (2017)** 25589-25596. (IF: 4.036)
- [13] A Photoactive Catalyst Ru-g-C₃N₄ for Hydrogen Transfer reaction of Aldehydes and Ketones. **Priti Sharma*** and Yoel Sasson. *Green Chemistry*. **19 (2017)** 844-852 (selected for cover page). (IF: 11.034).
- [14] Highly Active Recyclable SBA-15-EDTA-Pd Catalyst for Mizoroki-Heck, Stille and Kumada C–C Coupling Reactions. Jayant Rathod^b, **Priti Sharma^a**, Punam Pandey^b, A.P.Singh^{a*}, Pradeep Kumar^{*b}, *J Porous Mater* **24(2017)** 837–846. (IF: 2.287)
- [15] Synthesis and characterization of nanoporous silica SBA-15 diaminocyclohexane and its application in removal of Cu(II) and Ni(II) from aqueous solution. B. Sreenua, **Priti Sharma**, K. Seshaiaha, A. P. Singh. *Desalination and Water Treatment*, **57 (2016)** 15397-15409. (IF:1.234)
- [16] Synthesis of new hybrid sorbent 2- mercaptobenzaldehyde SBA-15 and its application in solid phase extraction of Cd(II) from water and food samples. B. Sreenu, K. Imran, K. Seshaiyah, **Priti Sharma**, A.P. Singh. *Analytical Methods*, **8 (2016)** 2947-2954. (IF: 3.532)
- [17] Carbon-Carbon bond forming reactions: Application of Covalently Anchored 2, 4, 6-Triallyloxy-1, 3, 5-triazine (TAT) Pd(II) Complex over Modified Surface of SBA-15 to Heck, Suzuki, Sonogashira and Hiyama cross coupling reactions. Chandani Singh^a, Kiran Jawade^a, **Priti Sharma^b**, Anand P. Singh^b, Pradeep Kumar^a, *Catalysis Communications*. **69 (2015)** 11–15. (IF: 3.532)
- [18] Covalently Anchored 2, 4, 6-triallyloxy-1, 3, 5-triazine (TAT) Pd(II) Complex over Modified Surface of SBA-15: Catalytic Applications in Hydrogenation Reaction. **Priti Sharma**, A. P. Singh*. *RSC Advance*, **4 (2014)** 58467-58475. (IF: 4.036)

- [19] Phosphine free SBA-15-EDTA-Pd highly active recyclable catalyst: Synthesis Characterization and application for Suzuki and Sonogashira reaction. **Priti Sharma**, A. P. Singh*. *Catalysis Science & Technology*, 4 (2014)2978-2989. (IF: 6.177)
- [20] Synthesis of a recyclable and efficient Pd(II)4-(2-pyridyl)-1, 2, 3-Triazole Complex over the solid Periodic Mesoporous Organosilica support by “Click reactions” for the Stille coupling reaction. **Priti Sharma**, A. P. Singh*. *RSC Advance*, 4 (2014) 43070-43079. (IF: 4.036)
- [21] Clay encapsulated Cu(OH)_x promoted homocoupling of arylboronic acids: An efficient and eco-friendly protocol. Bashir Ahmad Dara, A.P. Singh*, **Priti Sharma**, Anish Lazar. *Applied Catalysis A: General*, 470 (2014) 232-238. (IF: 9.8)
- [22] Chiral VOIV-Sal-Indanol complex over modified SBA-15: an efficient, reusable enantioselective catalyst for asymmetric sulfoxidation reaction. Anish Lazar, **Priti Sharma**, A.P. Singh* *Microporous and mesoporous materials*, 170 (2013) 331-339. (IF: 5.723)
- [23] Mn(III) based binaphthyl Schiff base complex heterogenized over organo-modified SBA-15: Synthesis, Characterization and Catalytic Application. **Priti Sharma**, Anish Lazar and A.P.Singh*. *Applied Catalysis A: General*, 440 (2012)101-110. (IF: 9.8)
- [24] Binaphthyl schiff base diamine complex covalently bonded to modified SBA-15: Synthesis, Characterization and Catalytic Application. **Priti Sharma**, A. P. Singh*. *Catalysis Today*, 198 (2012) 184-188. (IF: 5.70).
- [25] Visible-Light-Enabled Facile hydrogen transfer reaction & Esterification at room temperature. **Priti Sharma**, Srinivasu Kancharlapalli, Ravishankar G. Kadam, Subodh Kumar, Jan Filip, Zdenek, Giorgi Zoporella, Badura Zdenek, Rajender S. Varma, Manoj B. Gawande,* Radek Zbořil*
- [26] Fe-C₃N₄ single atom use as an additive in waste cooking oil biodiesel (WCOB) fuel. **Priti Sharma**, Vikas Sharma, Jan Filip, Dr. A. K. Hossain, Manoj B. Gawande,* Radek Zbořil*
- [27] Microwave-Assisted N-Alkylation of Amines with Alcohols over Iron Single-Atom via Borrowing Hydrogen Strategy. Gajanan Y. Shinde, **Priti Sharma**, Radek Zbořil, and Manoj B. Gawande* Manoj B. Gawande.
- [28] PtNi@nanosheet C₃N₄ bimetallic single atom Catalysed Catalytic hydroelementation of alkynes for precise trans with hydroboranes and hydrosilanes. **Priti Sharma**, Vitthal B. Saptal, Jan Filip, Manoj B. Gawande,* Radek Zbořil*.
- [29] Establishing the new facile platform as a single atom Pd@CN outperforms Pt@CN verses (Ni,Co etc.) even with high loading co-catalyst for photocatalytic H₂ evolution. **Priti Sharma**, Raza Waseem, Stepan Kment*, Alberto Naldoni, Radek Zbořil, Patrik Schmuki*.
- [30] Plasmonic TiN facile engineering with C₃N₄ nanotube for efficient water splitting. Slaby Martin, **Priti Sharma**, Stepan Kment*, Alberto Naldoni, Radek Zbořil, Patrik Schmuki*.
- [31] Facile engineering of TiO₂ with g-C₃N₄ with Pt Single Atoms for extravalent water splitting. Slaby Martin, **Priti Sharma**, Stepan Kment*, Alberto Naldoni, Radek Zbořil, Patrik Schmuki*.
- [32] Plasmonic TiN facile engineering with Pt single atom C₃N₄ nanotube for facile water splitting. Slaby Martin, **Priti Sharma**, Stepan Kment*, Alberto Naldoni, Radek Zbořil, Patrik Schmuki*.
- [33] Unique Bimetallic Pt-Ni single atom engineering over CN nanosheet for Precise selectivity in Hydrosilylation Reactions. **Priti sharma*** Vitthal B. Saptal, Manoj B. Gawande, Radek Zbořil. (Nature Catalysis submission).
- [34] Nickel-POM Decorated Graphene oxide as an Efficient Photocatalyst for Reduction of Nitrobenzene and Olefin at Room Temperature. **Priti Sharma*** O. Lahad, E. Millar, Yoel Sasson. (Manuscript submitted).
- [35] Highly active Recyclable SBA-15-Tz-RuTPP(II) catalyst via Click reaction: Synthesis, Application for H Transfer Reactions. **Priti Sharma**^a, Jayant Rathor^b, A.P.Singh^{c*}, P.K.Tripathi^b, Yoel Sasson^{*a}. (Under writing).
- [36] Highly Active BiOCl_xBr_{1-x}/V doped Photocatalyst for selective C-H activation under visible light at Room Temperature. **Priti Sharma*** Hani Gnayem and Yoel Sasson. (Manuscript under writing).
- [37] g-C₃N₄ Catalyzed Autoxidation of weak Carbon Acids Using PTC at room temperature. **Priti Sharma*** and Yoel Sasson. (Under writing).
- [38] Density Functional Theory based Computational Study for Iminium Ion formation via g-C₃N₄ Catalyzed in Knoevenagel Condensation Reaction. **Priti Sharma*** and Yoel Sasson*, Sasson Shaik*. (Under writing).

Surface-modified nanomaterial - based catalytic material for modern industry application. Priti Sharma, Manoj Gawande*.

Invited Talks

1. Seminar by Dr. Priti Sharma (February 28, 2023, 3:30 PM) hosted by the **Department of Chemistry, IIT Delhi**.
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Poster & Oral Presentations

- [1] Heterogenization of Rh(PPh₃)₃Cl over PMO for hydrogenation of olefins. Anish Lazar, Shoy George C, **Priti Sharma**, Jithesh P.R, A. P. Singh. *15th National Workshop on the Role of New Material in Catalysis. Indian Institute of Technology (IIT), Chennai, India, December 11-13, 2011. (Poster)*
- [2] Mn(III) based (S,S)(-)[N-3-tert-butyl-5-chloromethyl salicylidene]-N-[3,5-di tert-butyl salicylidene] 1,1-binaphthyl-2,2-diamine complex covalently bonded to modified SBA-15: Synthesis Characterization and Catalytic application. **Priti Sharma**, A. P. Singh. *One day National Seminar on Current Trends in Industrial Catalysis. CSIR-National Chemical Laboratory, Pune, India, June 11 2012. (Poster)*
- [3] Mn(III) based binaphthyl Schiff base complex heterogenized over organo-modified SBA-15: Synthesis, characterization and catalytic application. **Priti Sharma** A. P. Singh. *2nd International Indo-German Symposium on Green Chemistry & Catalysis for Sustainable Development. ICT, Matunga, Mumbai, India, October 29-31, 2012. (Poster)*
- [4] Binaphthyl schiff base diamine complex covalently bonded to modified SBA-15: Synthesis, Characterization and Catalytic Application. **Priti Sharma**, A. P. Singh. *International Conference on Technological Innovations for All Inclusive Growth alongside WAITRO 21st Biennial Congress & General Assembly. Shree Ram Institute for Industrial Research (SRI), New Delhi, India, November 8-9, 2012 India. (Poster)*
- [5] Mn(III) based binaphthyl Schiff base complex heterogenized over organo-modified SBA-15: Synthesis, Characterization and Catalytic Application. **Priti Sharma**, Anish. Lazar, S. Silpa, M. Mirajkar and A. P. Singh. *21st National Symposium on catalysis "catalysis for sustainable Development" (CATSYMP-21) CSIR-IICT, Hyderabad, India, February 11-13, 2013. (Oral).*
- [6] Mn(III) based binaphthyl Schiff base complex heterogenized over organo-modified SBA-15: Synthesis, characterization and catalytic application. **Priti Sharma**, A. P. Singh. *Science Day celebration on Green Chemistry & Catalysis. CSIR-NCL Pune, February 27, 2013 (Poster)*
- [7] Mn(III) based binaphthyl Schiff base complex heterogenized over organo-modified SBA-15: Synthesis, characterization and catalytic application. **Priti Sharma**, A.P. Singh. *7th International Symposium on Feedstock Recycling of Polymeric Material. India Habitate Centre, New-Delhi, India. October 23-26, 2013. (Poster)*
- [8] Schiff base complex heterogenized over organo-modified SBA-15: Synthesis, characterization and catalytic application. (Hindi Symposium). **Priti Sharma**, A.P. Singh. *Use of Catalyst in Organic Transformation. CSIR-National Chemical Laboratory, Pune, India, May 7th 2013, (Oral presentation in Hindi).*
- [9] A Photoactive Catalyst Ru-g-C₃N₄ for Hydrogen Transfer reaction of Aldehydes and Ketones. **Priti Sharma Israel, Hebrew University**, FACULTEVA DAY 22.03.2017 in Givat Ram (Poster).
- [10] A Photoactive Catalyst Ru-g-C₃N₄ for Hydrogen Transfer reaction of Aldehydes and Ketones. **Priti Sharma** ICS83 Annual Meeting of the Israel Chemical Society **Tel Aviv. February 13-14, 2018 (Poster).**
- [11] Photo catalysis and future aspects. 8th Annual **RCPTM Conference. Mikulov, Czech Republic. Priti Sharma (Oral presentation).**
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Personal Profile

First name - Priti
Family name - Sharma
Citizenship - Indian
Permanent Address - 570/178 Bhartiya Colony New Mandi,
Muzaffarnagar, 251001, U.P. INDIA

References

REFERENCE 1

Prof. Yoel Sasson
Casali Center of Applied Chemistry
Institute of Chemistry
The Hebrew University of Jerusalem,
Jerusalem-91904.;E-mail:ysasson@huji.ac.il.
Tel: +972 2658 4530. Fax: +972 2652 9626.

REFERENCE 2

Prof. Radek Zbořil, Ph.D.
Regional Centre of Advanced Technologies and
Materials
Olomouc, Czech Republic, 78371
Phone: (+420) 58 563 4762.
Email: radek.zboril@upol.cz

REFERENCE 3

Dr. A. P. Singh
Emeritus Chief Scientist, Chairman,
Catalysis Division
CSIR-NCL, Pune-411008, India
E-mail: singhap1153@gmail.com
Phone: +91 20 2590 2497

REFERENCE 4

Dr. Pradeep Kumar Tripathi
Emeritus Chief Scientist, Chair,
Organic Chemistry Division
CSIR-NCL, Pune-411 008, India
E-mail: pk.tripathi@ncl.res.in
Phone: 0091-20-25902050/2281

REFERENCE 5

Prof. Rajender Varma
Visiting position at Regional Centre of Advanced
Technologies and Materials, Palacký University,
Šlechtitelů 27, 783 71
Olomouc, Czech Republic
E-mail: rajvarma@hotmail.com

REFERENCE 6

Dr. Naldoni, Alberto
Associate Professor of Inorganic Chemistry
Università degli Studi di Torino.
& visiting position at Regional Centre of Advanced
Technologies and Materials, Palacký University,
Šlechtitelů 27, 783 71
E-mail: albert81n@gmail.com

REFERENCE 7

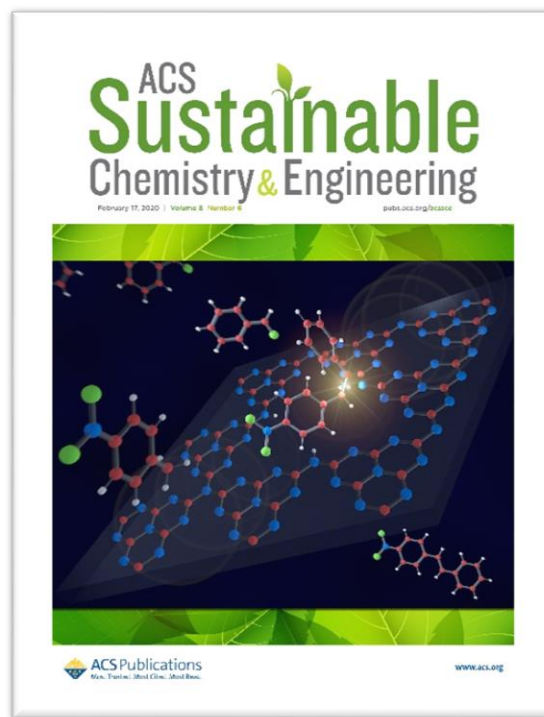
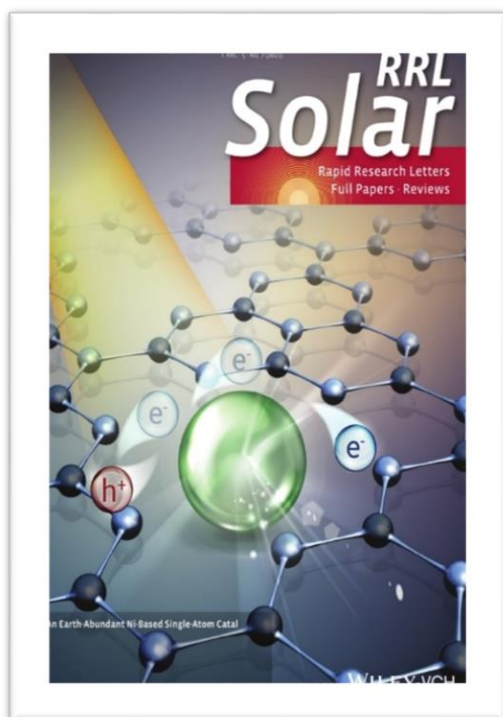
REFERENCE 8

Prof. Štěpán Kment
Regional Centre of Advanced Technologies and
Materials, Palacký University Olomouc,
Šlechtitelů 27, Olomouc, 783 71,
Czech Republic
E-mail: stepan.kment@upol.cz

Dr. Gareth Griffiths
Energy and Bioproducts Research Institute
Aston University, Birmingham B4, 7ET, United
Kingdom, Mechanical Engineering, Aston
University, Birmingham UK.
E-mail: g.griffiths@aston.ac.uk

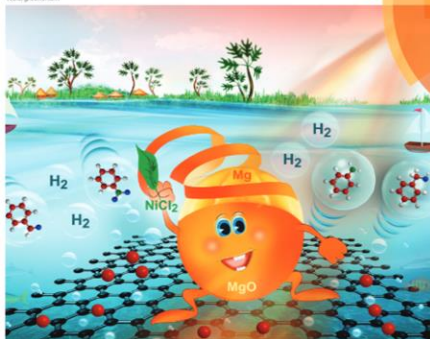
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@ Dr. Pradeep Kumar group from CSIR-NCCL, Pune, India.

Synthesis of heterogeneous Ru(bi-2,2,3-triazole) catalyst
supported over SBA-15: application to the hydrogen transfer
reaction and unusual highly selective 1,4-disubstituted triazole
formation via multicomponent click reaction

We demonstrated an efficient protocol for ligand synthesis
and covalent tethering to a solid support in a single step
using "click chemistry". A selectively SBA-15-(*trans*-Ru(bi-2,2,3-triazole))
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See A. P. Singh, Pradeep Kumar,
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