



## MANAV RACHNA UNIVERSITY, FARIDABAD

Sector 43, Aravalli Hills, Manav Rachna Campus Rd, Faridabad, Haryana 121004

### Dr. Jaya Tuteja

**Designation:** Assistant Professor

**Qualifications:** B.Sc (H) Chem, M.Tech (CSPT) from DU, M.S & PhD (Materials Science) from JAIST, Japan

**Email:** jaya@mru.edu.in

**Experience:** 06 Years

[Google Scholar Profile:](#)

<https://scholar.google.com/citations?user=HiESjR0AAAAJ&hl=en&authuser=1>



**Research Interest:** Green Chemistry, Biomass conversion, Design, characterization and application of Heterogeneous Catalysts, Renewable sources of Energy

#### + Industry Experience

**Worked as Manager** (Technical and Application Support) in YMC India Pvt Ltd. from Jul 2016 to Jan 2018. The prime responsibility was to resolve the HPLC column related issues for various pharma products

**Worked as** Technical and Application Specialist for TOSOH Pvt Ltd. from Sep 2015 to Jul 2016.

The prime responsibility was to resolve the HPLC column related issues for various pharma products

#### + Journal Publication Details:

**Tuteja J.**, Nishimura S. and Ebitani K. (2016) "**Change in Reactivity of Differently Capped AuPd Bimetallic Nanoparticle Catalysts for Selective Oxidation of Aliphatic Diols to Hydroxycarboxylic Acids in Basic Aqueous Solution**" *Catal. Today*, 265, 231-239. <https://doi.org/10.1016/j.cattod.2015.09.034> Scopus;

**Tuteja J.**, Nishimura S., Choudhary H. and Ebitani K. (2015) "**Selective Oxidation of 1,6-Hexanediol to 6-Hydroxycaproic Acid over Reusable Hydrotalcite-Supported Au-Pd Bimetallic Catalysts**" *ChemSusChem*, 8 (11), 1862-1866. <https://doi.org/10.1002/cssc.201500255>; Scopus, SCI

**Tuteja J.**, Nishimura S. and Ebitani K. (2014) "**Base-free Chemoselective Transfer Hydrogenation of Nitroarenes to Anilines with Formic Acid as Hydrogen Source by Reusable Heterogeneous Pd/ZrP Catalysts**" *RSC Advances*, 4 (72), 38241-38249. <https://doi.org/10.1039/C4RA06174H>, Scopus, SCI

**Tuteja J.**, Nishimura S., Choudhary H. and Ebitani K. (2014) "**Direct Synthesis of 1,6-Hexanediol from HMF over a Heterogeneous Pd/ZrP Catalyst using Formic Acid as Hydrogen Source**" *ChemSusChem*, 7(1), 96-100. <https://doi.org/10.1002/cssc.201300832>, Scopus, SCI

**Tuteja J.**, Nishimura S. and Ebitani K. (2012) "**One-pot Synthesis of Furans from Various Saccharides using Combination of Solid Acid and Base Catalysts**" *Bull. Chem. Soc. Jpn.*, 85 (3), 275-281. <https://doi.org/10.1246/bcsj.20110287>, Scopus, SCI

#### + Book/Chapter Publications:

V. V. Pathak, M. Kapahi, R. Rani, **J. Tuteja**, S. Banga, and V. Pandey; **Organic Waste for Biofuel Production: Energy Conversion Pathways and Applications**; Chapter 13; 2020; *Biofuels Production- Sustainability and Advances in Microbial Bioresources; Biofuel and Biorefinery Technologies* 11.

**+ Administrative Responsibilities:**

“Time Table Co-Coordinator of Chemistry Department” from May 2020- till now

“Website and FB wall Coordinator” from Jan 2018 to till now

**+ Event Organized(Conference/Seminar/FDP/Workshops**

Team member for organisation of Green & Sustainable Chemistry Conference held in Nov 2019 at MRU

**+ Patent**

Ebitani K., Nishimura S., **Tuteja J.** and Choudhary H., “**Reduction Catalyst, Synthesis of 1,6-hexaendiol, synthesis of amino-benzenecompounds**” JP patent Application No. 2013-215678.

Ebitani K., Nishimura S., **Tuteja J.** and Choudhary H., “**Metal supported catalyst, Catalyst material and Synthesis method of hydroxy-fatty-acids**” JP Patent Application No. 2015-069723.

**+ Presentations in International & National Conferences / Seminars**

**Jaya Tuteja; Selective Oxidation of 1,6-Hexanediol to 6-Hydroxycaproic acid using H<sub>2</sub>O<sub>2</sub> as Oxidant over Heterogeneous Catalyst; “Indian Analytical Congress-2019”, Organized by Indian Society of Analytical Scientists (ISAS)-Delhi Chapter & Federation of Indian Chambers of Commerce and Industry (FICCI) at Amity University, Noida, December 12-14, 2019.**

Namrata Gupta, Ashi Goyal, Jaya Tuteja ; **Green Hydrogenation of Organic Compounds without using Hydrogen Gas over Solid Catalyst; “Green & Sustainable Chemistry Conference”** Manav Rachna University, 07.11.2019. [Poster] *Best Poster Presentation Award.*

**Jaya Tuteja; Catalytic transformation of HMF to HDO over Pd/ZrP-Catalyst**

“*Green & Sustainable Chemistry Conference*” Manav Rachna University, 08.11.2019. [Oral]

**Jaya Tuteja, Shun Nishimura and Kohki Ebitani; “Effect of Capping Agent on AuPd Bimetallic Catalysts for the Selective Oxidation of 1,6-Hexanediol”** The 15th Korea - Japan Symposium on Catalysis, Busan, Republic of Korea, 2015.05.26. [Oral]

**Jaya Tuteja, Shun Nishimura and Kohki Ebitani; “Pd/ZrP-Catalyzed Transfer Hydrogenation Reactions using Formic Acid as Hydrogen Source”** 22<sup>nd</sup> IUPAC Conference on Physical and Organic Chemistry (ICPOC 22), Ottawa, Canada, 2014.08.11. [Oral]

**Jaya Tuteja, Shun Nishimura and Kohki Ebitani; “Convenient Pd/ZrP-Catalyzed Dissociation of Formic Acid for the Selective Hydrogenations”** JAIST Japan-India Symposium on Automotive Technologies (Energy, Fuel and Plastics), Nomi, Ishikawa, Japan, August 5, 2014. [Oral]

**Jaya Tuteja, Shun Nishimura and Kohki Ebitani; “Selective Transfer Hydrogenations of HMF and Nitroarenes using Formic Acid as Reducing Agent over Heterogeneous Pd/ZrP Catalyst”** The Seventh Tokyo Conference on Advanced Catalytic Science and Technology (TOCAT7), Kyoto, Japan, 2014.06.03. [Poster]

**Jaya Tuteja, Hemant Choudhary, Shun Nishimura and Kohki Ebitani; “Ring opening of HMF to produce 1,6-hexanediol over Pd/zirconium phosphate catalyst using formic acid as hydrogenating agent”** 247<sup>th</sup> ACS National Meeting & Exposition, Dallas, Texas, USA, 2014.03.20. [Oral]

**Kohki Ebitani, Hemant Choudhary, Jaya Tuteja, Pham Anh Son and Shun Nishimura; “Transformations of Biomass-derived Compounds into Useful Chemicals using Heterogeneous Catalytic Systems”;** International Conference on Advances in Biotechnology and Bioinformatics (ICABB 2013), Pune, India, 2013.11.25. [Oral-invited]

**Jaya Tuteja, Hemant Choudhary, Shun Nishimura and Kohki Ebitani; “Pd/ZrP Catalyzed Hydrogenolytic Ring Opening of HMF to 1,6-Hexanediol Using Formic Acid as Hydrogen Donor”** International Symposium on Advanced Materials 2013, JAIST, 2013.10.17. [Poster]

Kohki Ebitani, Saumya Dabral, **Jaya Tuteja** and Shun Nishimura; “**One-Pot Conversions of Sugars into Furfurals and Sugar Alcohols Using Heterogeneous catalysts**” 7th International Symposium on Acid-Base Catalysis(ABC-7), Tokyo, Japan, 2013.05.14. [Oral]

**Jaya Tuteja**, Shun Nishimura and Kohki Ebitani; “**One-pot conversion of sugars to furans by combination of heterogeneous acid & base catalysts**” Pure and Applied Chemistry International Conference 2013 (PACCON 2013), Chon Buri, Thailand, 2013.1.24. [Oral]

**+ Awards**

*Young early career Researcher Award* in 2019

Award for excellence Doctor Student in June 2015.

2014 JAIST Research Grant for Conference Presentation (Ottawa, Canada, 462,000 JPY)

2013 JAIST Research Grant for Conference Presentation (Dallas, USA, 323,000 JPY)

2012 JAIST Research Grant for Conference Presentation (Chon Buri, Thailand, 180,000 JPY)

BCSJ (Bulletin of the Chemical Society of Japan) Award, The Chemical Society of Japan, 2012

Selected for International Exchange Programme Scholarship 2011-2012. (1,752,000 JPY)

Graduate Research Program Scholarship from 2012-2015. (2,700,000 JPY)