

Recent Publications (Present -2010)

- Unveiling the Potential of Heterogeneous Systems for Reversible Hydrogen Storage in Liquid Organic Hydrogen Carriers- J. Jangir, B. R. Jagirdar, *ChemSusChem*, 2024, e202402018.
- Rapid Degradation of Dye Effluents with A SnS Catalyst: A Sustainable Approach Using Natural Light Under Ambient Conditions-G. Bhatia and B. R. Jagirdar, *Chemistry - An Asian Journal*, 2024, **20**, e202401003.
- B–H Bond Activation in a Rh(III) Hydrido Borohydride Complex [Rh(H)(K²-BH₄)t Bu₄ (PNCNP)] Gives a Rh(I) σ-Dihydrogen Complex [Rh(η²-H₂)t Bu₄ (PNCNP)]: An Experimental and Theoretical Study-S. Selvarasu, G. Joshi, D. Senthurpandi, M. Netaji, E. Jemmis, B.R. Jagirdar, *Organometallics*, 2023, **43**, 21, 2755–2766.
- Bimetallic Catalysts in Acetylene Semi-Hydrogenation: Conceptual Advances and Challenges-G. Tiwari, S. Sarkar, B. R. Jagirdar, *ChemCatChem*, 2024, 16, e202400586.
- Bridging Dehydrogenation and Hydrogenation in Heterogeneous Catalysis: A Demonstration of a Unified Catalytic Approach- J. Jangir, B. R. Jagirdar, *Chem. Eur. J.*, 2024, <https://doi.org/10.1002/chem.202400980>
- Monodisperse Ag, Au Nanoparticles via Solvated Metal Atom Dispersion and Digestive Ripening in Ionic Liquid-S. Sarkar and B. R. Jagirdar, *Langmuir*, 2024, <https://doi.org/10.1021/acs.langmuir.4c00440>
- Shape and Phase-Controlled One-Pot Synthesis of Air Stable Cationic AgCdS Nanocrystals, Optoelectronic and Electrochemical Hydrogen Evolution Studies- J. Chaturvedi, A.T. M. Munthasir, A. K. Nayak, L. N. Tripathi, P. Thilagar and B. R. Jagirdar, *Small Methods*, 2023, **8**, 2300907.
- H-atom site exchange in an iridium trans-dihydrogen/hydride complex, trans-[Ir(H)(η²-H₂)(ⁱPr)₄(POCOP)(DMAP)]⁺- N. K. Agrawal, S. Gayathridevi, S. R. Dash, K. Vanka and B. R. Jagirdar, *Dalton Transactions*, 2023, **52**, 13858-13863.
- Acetylene Semi-Hydrogenation at Room Temperature over Pd–Zn Nanocatalyst- G. Tiwari. Sharma, R. Verma, P. Gakhad, A. K. Singh, V. Polshettiwar and B. R. Jagirdar, *Chemistry - A European Journal*, 2023, **29**, e202301932.
- Phase-Controlled Pd-Sn Nanostructures via Co-Digestive Ripening: Catalytic Performance for Base-Free Oxidation of Benzyl Alcohol- G. Bhatia and B. R. Jagirdar, *Chemistry - An Asian Journal*, 2023, **18**, e202300343.
- Dual Routes toward Observation of a trans-H₂/Hydride Complex in an Iridium Pincer System and Hydrogenation Catalytic Activity- N. K. Agrawal, S. R.

Dash, K. Vanka and B. R. Jagirdar, *Organometallics*, 2023, **42**, 441-456.

- Agostic interaction versus small molecule binding in $[\text{RuH}(\text{CO})(\text{P}^{\text{Ph}}\text{NiPr}\text{P}^{\text{Ph}})]\text{BAr}_4^{\text{F}}$ complex- K. D. Netam, A. K. Pal, M. Nethaji and B.R. Jagirdar, *Journal of Organometallic Chemistry*, 2023, **992**,122693.
- Guerbet upgrading of ethanol to n-butanol using Ru(iii) catalysts under air- P. M. Mahitha, S. Nakul, N. V. Kulkarni, B. R. Jagirdar and W. D. Jones, *New Journal of Chemistry*, 2023, **47**, 7470-7475.
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- Co-digestive ripening assisted phase-controlled synthesis of Ag-Sn intermetallic nanoparticles and their degradation activity- G. Bhatia and B. R. Jagirdar, *Dalton Trans*, 2022, **51**, 12147-12160.
- Reactivity of four coordinate iridium complex towards hydrogen: An experimental and computational study- N. K. Agrawal, S. R. Dash, K. Vanka, Nethaji, M. and B.R. Jagirdar, *Journal of Organometallic Chemistry.*, 2022, 965-966, 112317.
- Controlled exchange bias behavior of manganese nanoparticles- G. Tiwari; B. R. Jagirdar; *Journal of Magnetism and Magnetic Materials*, 2021, **559 (3)**, 169504.
- Digestive-Ripening-Facilitated Nanoengineering of Diverse Bimetallic Nanostructures-C. Bhattacharya, N. Arora and B. R, Jagirdar, *Langmuir*, 2020, **35**, 6493-6505.
- Monodisperse colloidal metal nanoparticles to core-shell structures and alloy nanosystems via digestive ripening in conjunction with solvated metal atom dispersion: A mechanistic study- C. Bhattacharya, B. R. Jagirdar, *The Journal Of Physical Chemistry*. **2018**, *122*, 10559-10574.
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- Temperature-dependent elongation of the H-H bond in dihydrogen complexes of Ru(II) bearing an NHC ligand: Effect of the NHC and trans ligands" - D. Mala, B. R. Jagirdar, Y. P. Patil, M. Nethaji, *Inorg. Chim. Acta* **2018**, *483*, 411-424.
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