

Dr. Arvind H. Jadhav

Assistant Professor

Centre for Nano and Material Sciences

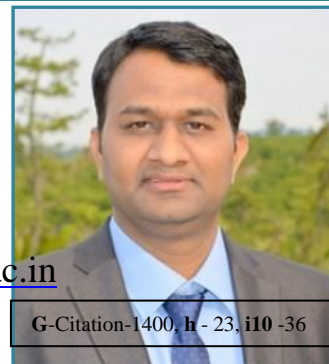
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OBJECTIVE

I am a career-oriented person having necessary skills, knowledge, and qualification with self-motivated, committed and determined in achieving my goals. I have also demonstrated negotiating and organizing skills, a firm sense of responsibility and my capacity to work hard to accomplish my objectives. Succeed and enjoyed working as a team member as well as independently.

EDUCATIONAL QUALIFICATION

- ❖ **Ph.D. Thesis (Sept-2010 to Feb-2014)** completed in Department of Energy and Biotechnology, Energy and Environment Fusion Technology Center, Myongji University, Yongin, South Korea under the supervision of **Prof. Hern Kim**, on topic entitled, ***“Synthesis, Properties, and Catalytic Activity of Novel Short Oligo (ethylene glycol) Functionalized Imidazolium based Dicationic Room Temperature Ionic Liquids for Organic Transformations and for Sugar Conversion”***. Secured Gold medal for my Ph.D. thesis in Myongji University, Republic of Korea.
- ❖ **M. Sc. (Organic Chemistry)** Maharashtra Udayagiri Mahavidyalaya, Udgir, S.R.T.M. University, Nanded, India, (March 2008) **with first class.**
- ❖ **B. Sc. (Chemistry, Botany, Zoology)**, Maharashtra Udayagiri Mahavidyalaya, Udgir, S.R.T.M. University, Nanded, India, (April 2006) with **first class with distinction.**

ACHIEMENTS & AWARDS

- ❖ *Awarded Best Poster Award In “ICONN-2019” conference, Feb-2019, SRM University Chennai, India for the poster entitled “Sustainable Chemical Fixation of CO₂ into Cyclic Carbonate Catalysed by Ionic Liquids Functionalized Activated Carbon”.*
- ❖ *Awarded Best Poster Award In “Nano Bangalore India Conference 2017”, Bangalore, India for the poster entitled “Maghemite/MWCNT Hybrid Nano Structures: Highly Efficient Catalyst for Hydrogen Generation from Sodium Borohydride”.*

- ❖ Awarded *Best Poster Award In “Nano Korea Symposium 2015”*, Seoul, South Korea for the poster entitled *“Microwave Assisted Synthesis of Morphology Controlled MgO Nano Structures Using Ionic Liquid and its Catalytic Activity in Organic Transformation”*.
- ❖ Awarded *Best Poster Award in “Nano Korea Symposium 2014”*, Seoul, South Korea for the poster entitled *“Preparation and characterization of electro-spun fabricated TiO₂/Ag composite nanofibers and its enhanced photo-catalytic activity for the degradation of Congo red”*.
- ❖ Awarded *“Best Oral Presentation Award”* for the talk entitled *“Esterification of Carboxylic Acids with Alkyl Halides at Room Temperature Using Highly Recyclable Tailor-made Dicationic Ionic Liquids Containing Bis-trifluoromethane Sulfonyl Anions”* in the conference of *“Korea Society of Industrial and Engineering Chemistry Conference 2014”* at Daegu, Republic of Korea.
- ❖ Awarded *“Higher Performance Graduate student award” Or “Best Thesis Award of 2014”* in Myongji University.
- ❖ Awarded *“Brian Korea Research Fellowship”* throughout my PhD in the period of Sept-2010- Feb-2014.
- ❖ Awarded *“Top Cited Article 2012”* in the *“Journal of Catalysis Communications”* and received honored certificate from the Elsevier Oxford, United Kingdom.
- ❖ Selected as **“Executive Editor”** in 2015 for the **“Universal Ground Research”** peer reviewed research Journal (SN – 2395-0404).
- ❖ Published a book entitled **“Basic concept in Chemistry”** (Authors – Asst. Prof. M.B Swami, **Dr. Arvind H. Jadhav**, Dr. Nilesh K. Halikar), IndoTech Publication, India, **ISBN- 978-93-83193-62-2**.
- ❖ Life time membership of *Catalysis Society of India -2018*.
- ❖ Life time membership of *Indian Association of Nano science and Nanotechnology-2019*.
- ❖ Life time membership of *Membrane Society of Republic of Korea-2011*.
- ❖ *Applied for 11 international and national patents* based on the ongoing research streams in the Lab such as Biomass Conversion; CO₂ conversion; Hydrogen Generation.

RESEARCH EXPERIENCE

- ❖ Presently working as **“Assistant Professor” (June-2017 to till date)** in **Centre for Nano and Material Sciences (CNMS)** Jain University Global Campus, Jakkasandra Post, Kanakpura Road, Ramanagaram, Bangalore, India.

- ❖ **Independed Research Group at Centre for Nano and Material Sciences (CNMS) contains:** 7 - *Ph.D. Students*; 4-*Master Students*; 1-*Research Assistant, Guided* - 2- *Ph.D. students*, 7 *Master Students*.
- ❖ **Postdoc experience (March, 1 2017 – May, 31, 2017)** and research task was “**Novel biomass derived ionic liquids based conductive hydrogel for electrochemical applications**” at Department of Chemical Engineering, Ajou University, Suwon, Republic of Korea.
- ❖ Worked as a “**Research Assistant Professor**” (November-2014 – February, 28 2017) and research task was “**Preparation of novel ionic liquids and nanomaterials for biomass conversion into value added products and CO₂ adsorption/conversion**” in Department of Energy Science and Technology, Energy and Environment Fusion Technology Center, Myongji University, Yongin, South Korea, with **Prof. Jeong Gil Seo**.
- ❖ **Postdoc experience (March, 1 2014 – November, 31 2014)** and research task was “**Preparation of novel ionic liquids for Biomass conversion and CO₂ adsorption and subsequent conversion**” in Department of Energy and Biotechnology, Energy and Environment Fusion Technology Center, Myongji University, Yongin, South Korea **with Prof. Jeong Gil Seo**.
- ❖ **Ph.D.** Thesis (Sept-2010 to Dec-2013) completed in Department of Energy Science and Technology, Energy and Environment Fusion Technology Center, Myongji University, Yongin, South Korea under the supervision of **Prof. Hern Kim**, on topic entitled, “*Synthesis, Properties, and Catalytic Activity of Novel Short Oligo (ethylene glycol) Functionalized Imidazolium based Dicationic Room Temperature Ionic Liquids for Organic Transformations and for Sugar Conversion*”.
- ❖ Worked as a “**Project Assistant**” in **National Chemical Laboratory (NCL)**, Catalysis Division, Pune, India, on a project entitled, “*Development of continuous process for biodiesel and Bio lubricant using different silicate as catalysts*”, under the supervision of **Dr. D. Shrinivas** (Scientist F). (Aug. 2008-Sept. 2010).
- ❖ I have completed my master project (M.Sc.) entitled, “*Development of Heterogeneous Catalyst for Friedel-Crafts Acylation Reaction*”, requirement for M. Sc. degree, during the academic year 2006-2008, under the guidance of **Dr. H. B. Borate, (Organic Chemistry Division, NCL)**, *Dr. A. G. Gaikwad, (C. E. P. D. Division, NCL) at National Chemical Laboratory (NCL), Pune, India,*

- ❖ Biomass conversion or sugar conversion into fine chemicals using homogeneous and heterogeneous catalyst. In addition, I have a research experience in “*Electrospinning*” technique in which, I have worked on preparation of nanofibers using *Horizontal* and *Vertical electrospinning* technique.
- ❖ Using *hollow nanofibers nozzle*, prepared polymeric nanofibers, polymeric mats and membrane preparation and applied in CO₂ adsorption-desorption phenomenon.
- ❖ I have experience in preparation of *Ionic liquid composite nanofibers, membranes, nanoparticles, and halo nanofibers and utilization in organic transformations.*

RESEARCH PATENTS

Sl. No.	Patent Title	Name of the Applicant (s)	Filed/Granted Patent No.	Award Date
01	Method For Sustainable Chemical Fixation of CO ₂ .	<u>Arvind H. Jadhav</u> , B. M. Nagaraja, D. Prasad, K. N. Patil, J. T. Bhanushali	PCT Patent Filed No.: PCT/IN2020/050708	Filed Date: 12-08-2020
02	Method For Sustainable Chemical Fixation of CO ₂ .	<u>Arvind H. Jadhav</u> , B. M. Nagaraja, D. Prasad, K. N. Patil, J. T. Bhanushali	Indian Patent: Filed-TEMP/E-1/31925/2019-CHE	Filed date: 13/08/2019
03	Organic-Inorganic hybrid catalyst composition and method for preparation thereof	<u>Arvind H. Jadhav</u> , B. M. Nagaraja, D. Prasad, K. N. Patil, V. K. Manoorkar	India Patent: Filed: TEMP/E-1/19221/2021-CHE	Filed Date: 26-07-2021
04	Method for generation of hydrogen from FeCuCo trimetallic oxide catalyzed NaBH ₄ hydrolysis	<u>Arvind H. Jadhav</u> , B. M. Nagaraja, K. N. Patil, D. Prasad, V. K. Manoorkar, Puneeth Kumar MS, N. A. Raju	Submitted to Patent Section: JAIN (Deemed-to-be University)	11-08-2021
05	Method for Catalytic Transformation of Carbon Dioxide into Value-added Products using Trimetallic Oxide Scaffolds	<u>Arvind H. Jadhav</u> , B. M. Nagaraja, D. Prasad, K. N. Patil, V. K. Manoorkar, Puneeth Kumar MS	Submitted to Patent Section: JAIN (Deemed-to-be University)	03-08-2021

06	Carbon Nanotubes-Based Catalyst Composition And Method For Preparation Thereof	B.M. Nagaraja, Arvind H. Jadhav , K.N. Patil, D. Prasad, V. K. Manoorkar	India Patent : Filed No.: TEMP /E- 1/36928/2021- CHE	Filed Date: 28-07- 2021
07	Application of Cu/ZnAl ₂ O ₄ -CeO ₂ catalyst for vapor phase dehydrogenation of biomass derived 1,4-butanediol to γ -butyrolactone	B.M. Nagaraja, Arvind H. Jadhav , K.N. Patil, D. Prasad, V. K. Manoorkar	Submitted: JAIN Ref.No.: JBR 1091	Ref. Date: 22-06- 2021
08	Chemoselective Hydrogenation Catalyst Composition and Method For Preparation Thereof	B.M. Nagaraja, Arvind H. Jadhav , K.N. Patil, D. Prasad, V.K. Manoorkar	India Patent: Filed: TEMP/E- 1/5033/2021- CHE	Filed Date: 03-02- 2021
09	Application of Ni-Cu@SNTs catalyst for chemoselective hydrogenation of cinnamaldehyde to hydrocinnamaldehyde	B.M. Nagaraja, Arvind H. Jadhav , K.N. Patil, D. Prasad, Manikanta P.	Submitted: JAIN Ref.No.: JBR 1134	Ref. Date: 31-01- 2022
10	Method for Solvent-free Transformation of Carbon Dioxide into Oxazolidinone Catalyzed by Porous Trimetallic Oxide Foam	Arvind H. Jadhav , B.M. Nagaraja, P. M. Srinivasappa, D. Prasad, K. N. Patil, N.A. Raju	Submitted to Patent Section: JAIN (Deemed-to-be University)	Ref. Date: 14-11- 2021
11	Bimetallic Metal Coated Silicon Nanotubes Catalyst Composition And Method For Synthesis Thereof	B.M. Nagaraja, Arvind H. Jadhav , K. N. Patil, P. M. Srinivasappa, Manikanta P	Submitted to Patent Section: JAIN (Deemed-to-be University) : JBR 1134	Ref. Date- 04-02- 2022
12	Process for Catalytic Fixation of Carbon Dioxide Catalyzed by Covalently Immobilization of Ionic Liquids on Activated Carbon H138	Arvind H. Jadhav , J.G. Seo, D. Prasad, Puneethkumar M. S.	Submitted to Patent Section: JAIN (Deemed-to-be University) : JBR.1141	22-02- 2022

TEACHING EXPERINCE

- ❖ From last June 2017 teaching full time following subjects
 - Green Chemistry,
 - Natural Products,
 - Organic photochemistry,
 - Spectroscopy such as NMR, IR and UV spectroscopy.
 - Additionally conducting physical chemistry labs, 12 experiments per semester.

PUBLICATION LIST

- 1] **Jadhav, A. H.;** Kim, H. Short Oligo (Ethylene Glycol) Functionalized Imidazolium Dicationic Room Temperature Ionic Liquids: Synthesis, Properties, and Catalytic Activity in Azidation. *Chem. Eng. J.* **2012**, *200*, 264–274. (I.F. 13.273)
- 2] **Jadhav, A. H.;** Kim, H.; Hwang, I. T. Efficient Selective Dehydration of Fructose and Sucrose into 5-Hydroxymethylfurfural (HMF) Using Dicationic Room Temperature Ionic Liquids as a Catalyst. *Catal. Commun.* **2012**, *21*, 96–103. (I.F. 3.626)
- 3] **Jadhav, A. H.;** Kim, H. A Mild, Efficient, and Selective Deprotection of Tert-Butyldimethylsilyl (TBDMS) Ethers Using Dicationic Ionic Liquid as a Catalyst. *Tetrahedron Lett.* **2012**, *53* (39), 5338–5342. (I.F. 2.379)
- 4] **Jadhav, A. H.;** Kim, H.; Hwang, I. T. An Efficient and Heterogeneous Recyclable Silicotungstic Acid with Modified Acid Sites as a Catalyst for Conversion of Fructose and Sucrose into 5-Hydroxymethylfurfural in Superheated Water. *Bioresour. Technol.* **2013**, *132*, 342–350. (I.F. 9.6)
- 5] **Jadhav, A. H.;** Kim, H. Solvent Free Synthesis of 1, 5-Benzodiazepine Derivatives over the Heterogeneous Silver Salt of Silicotungstic Acid under Ambient Conditions. *RSC Adv.* **2013**, *3* (15), 5131–5140. (I.F. 3.36)
- 6] **Jadhav, A. H.;** Chinnappan, A.; Patil, R. H.; Chung, W.-J.; Kim, H. Deprotection of Tert-Butyldimethylsilyl (TBDMS) Ethers Using Efficient and Recyclable Heterogeneous Silver Salt of Silicotungstic Acid Catalyst under Mild Reaction Condition. *Chem. Eng. J.* **2014**, *236*, 300–305. (I.F. 13.273)
- 7] **Jadhav, A. H.;** Chinnappan, A.; Patil, R. H.; Kostjuk, S. V; Kim, H. Short Oligo Ethylene Glycolic Tailor-Made Ionic Liquids as Highly Efficient and Reusable Catalyst for One-Pot Synthesis of 1, 5-Benzodiazepine Derivatives under Solvent Free Condition. *Chem. Eng. J.* **2014**, *240*, 228–234. (I.F. 13.273)

- 8] **Jadhav, A. H.**; Chinnappan, A.; Patil, R. H.; Kostjuk, S. V.; Kim, H. Green Chemical Conversion of Fructose into 5- Hydroxymethylfurfural (HMF) Using Unsymmetrical Dicationic Ionic Liquids under Mild Reaction Condition. *Chem. Eng. J.* **2014**, *243*, 92–98. (I.F. 13.273)
- 9] **Jadhav, A. H.**; Mai, X. T.; Ofori, F. A.; Kim, H. Preparation, Characterization, and Kinetic Study of End Opened Carbon Nanotubes Incorporated Polyacrylonitrile Electrospun Nanofibers for the Adsorption of Pyrene from Aqueous Solution. *Chem. Eng. J.* **2015**, *259*, 348–356. (I.F. 13.273)
- 10] **Jadhav, A. H.**; Kim, H. Preparation and Application of Supramolecular Assembled β -Cyclodextrin/Polyacrylonitrile Composite Nanofibers as a Highly Efficient Adsorbent for Dye Removal. In *Advanced Materials Research*; Trans Tech Publ, 2013; Vol. 622, pp 827–832.
- 11] **Jadhav, A. H.**; Lee, K.; Koo, S.; Seo, J. G. Esterification of Carboxylic Acids with Alkyl Halides Using Imidazolium Based Dicationic Ionic Liquids Containing Bis-Trifluoromethane Sulfonimide Anions at Room Temperature. *RSC Adv.* **2015**, *5* (33), 26197–26208. (I.F. 3.36)
- 12] **Jadhav, A. H.**; Chinnappan, A.; Hiremath, V.; Seo, J. G. Synthesis and Characterization of AlCl_3 Impregnated Molybdenum Oxide as Heterogeneous Nano-Catalyst for the Friedel-Crafts Acylation Reaction in Ambient Condition. *J. Nanosci. Nanotechnol.* **2015**, *15* (10), 8243–8250. (I.F. 1.1)
- 13] **Jadhav, A. H.**; Zhang, H.; Agyemang, F. O.; Hiremath, V.; Lee, K.; Chandradass, J.; Seo, J. G.; Kim, H. Preparation and Characterization of Electro-Spun Fabricated Ag– TiO_2 Composite Nanofibers and Its Enhanced Photo-Catalytic Activity for the Degradation of Congo Red. *J. Nanosci. Nanotechnol.* **2015**, *15* (10), 7988–7996. (I.F. 1.1)
- 14] **Jadhav, A. H.**; Mai, X. T.; Appiah-Ntiamoah, R.; Lee, H.; Momade, F. W. Y.; Seo, J. G.; Kim, H. Preparation and Characterization of Palmitoyl Grafted Cellulose Nano Absorbent for the Efficient Adsorption of Pyrene from Aqueous Solution. *J. Nanosci. Nanotechnol.* **2015**, *15* (10), 7980–7987. (I.F. 1.1)

- 15] **Jadhav, A. H.**; Thorat, G. M.; Lee, K.; Lim, A. C.; Kang, H.; Seo, J. G. Effect of Anion Type of Imidazolium Based Polymer Supported Ionic Liquids on the Solvent Free Synthesis of Cycloaddition of CO₂ into Epoxide. *Catal. Today* **2016**, 265, 56–67. (I.F. 6.766)
- 16] **Jadhav, A. H.**; Lim, A. C.; Thorat, G. M.; Jadhav, H. S.; Seo, J. G. Green Solvent Ionic Liquids: Structural Directing Pioneers for Microwave-Assisted Synthesis of Controlled MgO Nanostructures. *RSC Adv.* **2016**, 6 (38), 31675–31686. (I.F. 3.36)
- 17] Swami, M. B.; **Jadhav, A. H.**; Mathpati, S. R.; Ghuge, H. G.; Patil, S. G. Eco-Friendly Highly Efficient Solvent Free Synthesis of Benzimidazole Derivatives over Sulfonic Acid Functionalized Graphene Oxide in Ambient Condition. *Res. Chem. Intermed.* **2017**, 43 (4), 2033–2053.
- 18] Appiah-Ntiamoah, R.; **Jadhav, A. H.**; Puguan, J. M. C.; Momade, F. W. Y.; Kim, H. A Silica Nanoparticle Supported Fluorescence “Turn-on” Fluoride Ion Sensing System with Tunable Structure and Sensitivity. *RSC Adv.* **2015**, 5 (39), 30526–30536. (I.F. 3.36)
- 19] Chandradass, J.; **Jadhav, A. H.**; Kim, H. Surfactant Modified MgFe₂O₄ Nanopowders by Reverse Micelle Processing: Effect of Water to Surfactant Ratio (R) on the Particle Size and Magnetic Property. *Appl. Surf. Sci.* **2012**, 258 (7), 3315–3320. (I.F. 6.707)
- 20] Chandradass, J.; **Jadhav, A. H.**; Kim, K. H.; Kim, H. Influence of Processing Methodology on the Structural and Magnetic Behavior of MgFe₂O₄ Nanopowders. *J. Alloys Compd.* **2012**, 517, 164–169. (I.F. 4.175)
- 21] Chinnappan, A.; **Jadhav, A. H.**; Kim, H.; Chung, W.-J. Ionic Liquid with Metal Complexes: An Efficient Catalyst for Selective Dehydration of Fructose to 5-Hydroxymethylfurfural. *Chem. Eng. J.* **2014**, 237, 95–100. (I.F. 13.273)
- 22] Chinnappan, A.; **Jadhav, A. H.**; Puguan, J. M. C.; Appiah-Ntiamoah, R.; Kim, H. Fabrication of Ionic Liquid/Polymer Nanoscale Networks by Electrospinning and Chemical Cross-Linking and Their Application in Hydrogen Generation from the Hydrolysis of NaBH₄. *Energy* **2015**, 79, 482–488. (I.F. 7.147)
- 23] Chinnappan, A.; **Jadhav, A. H.**; Chung, W.-J.; Kim, H. Conversion of Sugars (Sucrose and Glucose) into 5-Hydroxymethylfurfural in Pyridinium Based Dicationic Ionic Liquid ([C₁₀(EPy)₂]₂Br⁻) with Chromium Chloride as a Catalyst. *Ind. Crops Prod.* **2015**, 76, 12–17. (I.F. 5.645)
- 24] Chinnappan, A.; **Jadhav, A. H.**; Chung, W.-J.; Kim, H. Synthesis of 1-Amidoalkyl 2-Naphthols Using Ionic Liquid with Metal Complex as an Efficient and Reusable Catalyst

- 25] Swami, M. B.; Patil, S. G.; Mathapati, S. R.; Ghuge, H. G.; **Jadhav, A. H.** Ecofriendly One Pot Synthesis of 2-Substituted Benzimidazole. *Der Pharma Chem* **2015**, 7, 533–535.
- 26] Hiremath, V.; **Jadhav, A. H.**; Lee, H.; Kwon, S.; Seo, J. G. Highly Reversible CO₂ Capture Using Amino Acid Functionalized Ionic Liquids Immobilized on Mesoporous Silica. *Chem. Eng. J.* **2016**, 287, 602–617. (I.F. 13.273)
- 27] Jadhav, H. S.; Kalubarme, R. S.; **Jadhav, A. H.**; Seo, J. G. Highly Stable Bilayer of LiPON and B₂O₃ Added Li_{1.5}Al_{0.5}Ge_{1.5}(PO₄) Solid Electrolytes for Non-Aqueous Rechargeable Li-O₂ Batteries. *Electrochim. Acta* **2016**, 199, 126–132. (I.F. 4.086)
- 28] Jadhav, H. S.; Kalubarme, R. S.; **Jadhav, A. H.**; Seo, J. G. Iron-Nickel Spinel Oxide as an Electrocatalyst for Non-Aqueous Rechargeable Lithium-Oxygen Batteries. *J. Alloys Compd.* **2016**, 666, 476–481. (I.F. 4.175)
- 29] Jadhav, H. S.; Pawar, S. M.; **Jadhav, A. H.**; Thorat, G. M.; Seo, J. G. Hierarchical Mesoporous 3D Flower-like CuCo₂O₄/NF for High-Performance Electrochemical Energy Storage. *Sci. Rep.* **2016**, 6, 31120. (I.F. 5.133)
- 30] Shavi, R.; **Jadhav, A. H.**; Lee, K.; Seo, J. G. Sulfonated Nanolayers of H⁺-Montmorillonite as an Efficient Acidic Catalyst for Hydrogen Generation from Hydrolysis of Sodium Borohydride. *J. Nanosci. Nanotechnol.* **2016**, 16 (10), 10980–10985. (I.F. 1.1)
- 31] Thorat, G. M.; **Jadhav, A. H.**; Jadhav, H. S.; Lee, K.; Seo, J. G. Template-Free Synthesis and Characterization of Nickel Oxide Nanocrystal with High-Energy Facets in Deep Eutectic Solvent. *J. Nanosci. Nanotechnol.* **2016**, 16 (10), 11009–11013. (I.F. 1.1)
- 32] Jayesh, T. B.; Itika, K.; Babu, G. V. R.; Rao, K. S. R.; Keri, R. S.; **Jadhav, A. H.***; Nagaraja, B. M. Vapour Phase Selective Hydrogenation of Benzaldehyde to Benzyl Alcohol Using Cu Supported Mg-Al Hydrotalcite Catalyst. *Catal. Commun.* **2018**, 106, 73–77. (I.F. 3.626)
- 33] Kainthla, I.; Gurrum, V. R. B.; Bhanushali, J. T.; Kamaraju, S. R. R.; Keri, R. S.; Gosavi, S. W.; **Jadhav, A. H.***; Nagaraja, B. M. In Situ Generation of Cu⁰ Supported on TiO₂ Aerogel as a Catalyst for the Vapour Phase Hydrogenation of Nitrobenzene to Aniline. *Catal. Letters* **2018**, 148 (9), 2891–2900. (I.F. 3.186)
- 34] **Jadhav, A. H.***; Prasad, D.; Jadhav, H. S.; Nagaraja, B. M.; Seo, J. G. Tailoring and Exploring the Basicity of Magnesium Oxide Nanostructures in Ionic Liquids for Claisen-Schmidt Condensation Reaction. *Energy* **2018**, 160, 635–647. (I.F. 7.147)
- 35] Khansole, G. S.; Prasad, D.; Angulwar, J. A.; Atar, A. B.; Nagaraja, B. M.; **Jadhav, A.**

- H.***; Bhosale, V. N. Tetrabutylammonium Hydrogen Sulfate Mediated Three-Component Reaction for the Synthesis of Thiadiazolo [2, 3-b] Quinazolin-6-(7H)-Ones and Antioxidant Activity. *Mater. Today Proc.* **2019**, *9*, 653–660. (I.F. 1.24)
- 36] Mathapati, S. R.; Prasad, D.; Atar, A. B.; Mallanna Nagaraja, B.; Dawle, J. k.; **Jadhav, A. H.*** Phosphorofluoridic Acid as an Efficient Catalyst for One Pot Synthesis of Dihydropyrimidinones under Solvent Free and Ambient Condition. *Mater. Today Proc.* **2019**, 661–668. (I.F. 1.24)
- 37] Prasad, D.; Patil, K. N.; Chaitra, C. R.; Sandhya, N.; Bhanushali, J. T.; Gosavi, S. W.; **Jadhav, A. H.***; Nagaraja, B. M. Sulfonic Acid Functionalized PVA/PVDF Composite Hollow Microcapsules: Highly Phenomenal & Recyclable Catalysts for Sustainable Hydrogen Production. *Appl. Surf. Sci.* **2019**, *488*, 714–727. (I.F. 6.707)
- 38] Prasad, D.; Patil, K. N.; Sandhya, N.; Chaitra, C. R.; Bhanushali, J. T.; Samal, A. K.; Keri, R. S.; **Jadhav, A. H.***; Nagaraja, B. M. Highly Efficient Hydrogen Production by Hydrolysis of NaBH₄ Using Eminently Competent Recyclable Fe₂O₃ Decorated Oxidized MWCNTs Robust Catalyst. *Appl. Surf. Sci.* **2019**, *489*, 538–551. (I.F. 6.707)
- 39] Mathapati, S. R.; **Jadhav, A. H.***; Swami, M. B.; Dawle, J. K. Zinc Sulfamate Catalyzed Efficient Selective Synthesis of Benzimidazole Derivatives Under Ambient Conditions. *Lett. Org. Chem.* **2019**, *16* (9), 740–749. (I.F. 0.867)
- 40] Prasad, D.; Patil, K. N.; Bhanushali, J. T.; Nagaraja, B. M.; **Jadhav, A. H.*** Sustainable Fixation of CO₂ into Epoxides to Form Cyclic Carbonates Using Hollow Marigold CuCo₂O₄ Spinel Microspheres as a Robust Catalyst. *Catal. Sci. Technol.* **2019**, *9* (16), 4393–4412. (I.F. 6.119)
- 41] Bhanushali, J. T.; Prasad, D.; Patil, K. N.; Babu, G. V. R.; Kainthla, I.; Kamaraju, S. R. R.; **Jadhav, A. H.***; Nagaraja, B. M. Selectively Regulated Vapour Phase Dehydrogenation of 1, 4-Butanediol to γ -Butyrolactone Employing a Copper Based Ceria Catalyst. *New J. Chem.* **2019**, *43*, 11968-11983 (I.F. 3.591)
- 42] Patil, K. N.; Prasad, D.; Bhanushali, J. T.; Kim, H.; Atar, A. B.; Nagaraja, B. M.; **Jadhav, A. H.*** Sustainable Hydrogen Generation by Catalytic Hydrolysis of NaBH₄ Using Tailored Nanostructured Urchin-like CuCo₂O₄ Spinel Catalyst. *Catal. Letters* **2020**, *150* (2), 586–604. (I.F. 3.186)
- 43] Atar, A. B.; Kang, J.; **Jadhav, A. H.** A [Bmim] Cl-Promoted Domino Protocol Using an Isocyanide-Based [4+ 1]- Cycloaddition Reaction for the Synthesis of Diversely Functionalized 3-Alkylamino-2-Alkyl/Aryl/Hetero-Aryl Indolizine-1- Carbonitriles under Solvent-Free Conditions. *New J. Chem.* **2020**, *44* (8), 3241–3248. (I.F. 3.591)

- 44] Bhanushali, J. T.; Prasad, D.; Patil, K. N.; Reddy, K. S.; Rao, K. S. R.; **Jadhav, A. H.***; Nagaraja, B. M. Simultaneous Dehydrogenation of 1, 4-Butanediol to γ -Butyrolactone and Hydrogenation of Benzaldehyde to Benzyl Alcohol Mediated over Competent CeO_2 - Al_2O_3 Supported Cu as Catalyst. *Int. J. Hydrogen Energy* **2020**, *45*, 12874-12888. (I.F. **5.816**)
- 45] Bhanushali, J. T.; Prasad, D.; Patil, K. N.; Reddy, K. S.; Kainthla, I.; Rao, K. S. R.; **Jadhav, A. H.***; Nagaraja, B. M. Tailoring the Catalytic Activity of Basic Mesoporous Cu/ CeO_2 Catalyst by Al_2O_3 for Selective Lactonization and Dehydrogenation of 1, 4-Butanediol to γ -Butyrolactone. *Catal. Commun.* **2020**, 106049-106055. (I.F. **3.626**)
- 46] Sofi, H. S.; Akram, T.; Shabir, N.; Vasita, R.; **Jadhav, A. H.**; Sheikh, F. A. Regenerated Cellulose Nanofibers from Cellulose Acetate: Incorporating Hydroxyapatite (HAp) and Silver (Ag) Nanoparticles (NPs), as a Scaffold for Tissue Engineering Applications. *Mater. Sci. Eng. C* **2021**, *118*, 111547-111562. (I.F. **7.328**)
- 47] Hegde, R. V; Ong, T.-G.; Ambre, R.; **Jadhav, A. H.**; Patil, S. A.; Dateer, R. B. Regioselective Direct C2 Arylation of Indole, Benzothiophene and Benzofuran: Utilization of Reusable Pd NPs and NHC-Pd@ MNPs Catalyst for C-H Activation Reaction. *Catal. Letters* **2021**, *151* (5), 1397-1405. (I.F. **3.186**)
- 48] Mathapati, S. R.; Patil, K. N.; Mathakari, S. S.; Suryawanshi, A. W.; **Jadhav, A. H.***. Fluorinated Phosphoric Acid as a Versatile Effective Catalyst for Synthesis of Series of Benzimidazoles, Benzoxazoles and Benzothiazoles at Room Temperature. *Phosphorus. Sulfur. Silicon Relat. Elem.* **2021**, 1-10. (I.F. **1.082**)
- 49] Prasad, D.; Patil, K. N.; Dateer, R. B.; Kim, H.; Nagaraja, B. M.; **Jadhav, A. H.*** Basicity Controlled MgCo_2O_4 Nanostructures as Catalyst for Viable Fixation of CO_2 into Epoxides at Atmospheric Pressure. *Chem. Eng. J.*, **2021**, *405*, 126907. (I.F. **13.273**)
- 50] Prasad, D.; Patil, K. N.; Chaudhari, N. K.; Kim, H.; Nagaraja, B. M.; **Jadhav, A. H.*** Paving Way for Sustainable Earth- Abundant Metal Based Catalysts for Chemical Fixation of CO_2 into Epoxides for Cyclic Carbonate Formation. *Catal. Rev.* **2020**, 1-88. (I.F. **20.2**)
- 51] (Patil, K. N.; Prasad, D.; Bhanushali, J. T.; Kakade, B.; **Jadhav, A. H.***; Nagaraja, B. M. Chemoselective Hydrogenation of Cinnamaldehyde over a Tailored Oxygen-Vacancy-Rich Pd@ ZrO_2 Catalyst. *New J. Chem.* **2021**, *45* (12), 5659-5681. (I.F. **3.591**)
- 52] Patki, A. S.; Patil, K. N.; Kusuma, S.; Muley, D. B.; **Jadhav, A. H.*** One-Pot Synthesis of Multicomponent Pyrazole-4- Carbonitrile Derivatives under Solvent-Free Condition

2.914)

- 53] Prasad, D.; Patil, K. N.; Manoorkar, V. K.; Dateer, R. B.; Nagaraja, B. M.; **Jadhav, A. H.*** Sustainable Catalytic Process for Fructose Dehydration Using Dicationic Ionic Liquid Assisted ZSM-5 Zeolite. *Mater. Manuf. Process.* **2021**, 1–8. (I.F.4.616)
- 54] Ashraf, R.; Maqbool, T.; Beigh, M. A.; **Jadhav, A. H.**; Sofi, H. S.; Sheikh, F. A. Synthesis, Characterization, and Cell Viability of Bifunctional Medical-grade Polyurethane Nanofiber: Functionalization by Bone Inducing and Bacteria Ablating Materials. *J. Appl. Polym. Sci.* **2021**, 138 (25), 50594. (I.F.3.125)
- 55] Patil, K. N.; Prasad, D.; Manoorkar, V. K.; Nabgan, W.; Nagaraja, B. M.; **Jadhav, A. H.*** Engineered Nano-Foam of Tri- Metallic (FeCuCo) Oxide Catalyst for Enhanced Hydrogen Generation via NaBH₄ Hydrolysis. *Chemosphere* **2021**, 130988. (I.F.7.086)
- 56] Hegde, R. V; Ghosh, A.; **Jadhav, A. H.**; Nizam, A.; Patil, S. A.; Peter, F.; Dateer, R. B. Biogenic Synthesis of Pd- Nanoparticles Using Areca Nut Husk Extract: A Greener Approach to Access α -Keto Imides and Stilbenes. *New J. Chem.* **2021**, 45 (35), 16213–16222. (I.F. 3.591)
- 57] N.B. Wadwale, D.Prasad, A. R. Karad, G.S. Khansole, S.S. Choudhare, S.V. Navhate, V.N. Bhosale, **Jadhav, A.H.***, Synthetic Development and Assessment of Antioxidant Activity of Imino Triazolo Pyrimidine Carbonitrile and its derivatives; *Russ. J. Org. Chem.*, **2021**, 57 (12), 2031-2038. (I.F. 0.6).
- 58] Hemanth, N. R.; Kim, T.; Kim, B.; **Jadhav, A. H.**; Lee, K.; Chaudhari, N. K. Transition Metal Dichalcogenide-Decorated MXenes: Promising Hybrid Electrodes for Energy Storage and Conversion Applications. *Mater. Chem. Front.* **2021**, 5 (8), 3298–3321. (I.F. 4.251)
- 59] Padaki, M.; Subrahmanya, T. M.; Prasad, D.; **Jadhav, A. H.*** Electrospun Nanofibers: Role of Nanofibers in Water Remediation and Effect of Experimental Variables on Their Nano Topography and Application Processes. *Environ. Sci. Water Res. Technol.* **2021**. (I.F. 6.06)
- 60] Patil, K. N.; Prasad, D.; Manoorkar, V. K.; Bhanushali, J. T.; **Jadhav, A. H.***; Nagaraja, B. M. Selective Vapour-Phase Dehydrocyclization of Biomass-Derived 1, 4-Butanediol to γ -Butyrolactone over Cu/ZnAl₂O₄-CeO₂ Catalyst. *J. Ind. Eng. Chem.* **2021**. (I.F. 6.064)
- 61] Bhol, P.; Swain, S.; Jena, S.; Bhatte, K.; Rout, C. S.; Saxena, M.; **Jadhav, A. H.**; Samal, A. K. Co-Decorated Tellurium Nanotubes for Energy Storage Applications. *ACS Appl. Nano Mater.* **2021**, 4 (9), 9008–9021. (I.F. 5.097)

- 62] Nabgan, W.; Nabgan, B.; Abdullah, T. A. T.; Ikram, M.; **Jadhav, A. H.**; Ali, M. W.; Jalil, A. A. Hydrogen and Value-Added Liquid Fuel Generation from Pyrolysis-Catalytic Steam Reforming Conditions of Microplastics Waste Dissolved in Phenol over Bifunctional Ni-Pt Supported on Ti-Al Nanocatalysts. *Catal. Today* **2021**. (Just Accepted) (I.F. 6.766)
- 63] Nabgan, W.; Jalil, A. A.; Nabgan, B.; **Jadhav, A. H.**; Ikram, M.; Ul-Hamid, A.; Ali, M. W.; Hassan, N. S. Sustainable Biodiesel Generation through Catalytic Transesterification of Waste Sources: A Literature Review and Bibliometric Survey. *RSC Adv.* **2022**, *12* (3), 1604–1627. (I.F. 3.36)
- 64] Raju, N. A.; Prasad, D.; Srinivasappa, P. M.; Biradar, A.; Gholap, S. S.; Samal, A. K.; Mallanna, N. M. B.; **Jadhav, A. H.***. Recent Developments in State-of-the-Art Silica-Modified Catalysts for Fixation of CO₂ into Epoxides to Organic Carbonates. *Sustain. Energy Fuels* **2022**. (I.F. 6.367)
- 65] Nabgan, W.; Nabgan, B.; Tuan Abdullah, T. A.; Ikram, M.; **Jadhav, A. H.**; Jalil, A. A.; Ali, M. W. Highly Active Biphasic Anatase-Rutile Ni-Pd/TNPs Nanocatalyst for the Reforming and Cracking Reactions of Microplastic Waste Dissolved in Phenol. *ACS Omega* **2022**. (I.F. 3.512)
- 66] Nabgan, W.; Nabgan, B.; Ikram, M.; **Jadhav, A. H.**; Ali, M. W.; Ul-Hamid, A.; Nam, H.; Lakshminarayana, P.; Bahari, M. B.; Khusnun, N. F. Synthesis and Catalytic Properties of Calcium Oxide Obtained from Organic Ash over a Titanium Nanocatalyst for Biodiesel Production from Dairy Scum. *Chemosphere* **2022**, *290*, 133296. (I.F.7.086).
- 67] Kusuma,S.; Puneeth Kumar M.S; ChaudhariN.; Soni, A.; Nabgan, W.; **Jadhav, A.H.***; A Facile One-Pot Synthesis of 1, 5 Benzodiazepine Derivatives by Using Ferrocene supported Activated Carbon under Solvent-Free Condition; *RSC Advances*, Accepted **2022** - (I.F.-3.3).
- 68] Shinde, P.; Puneethkuamr, M.S.; Rout C.H.; **Jadhav, A.H.**; Rational Competent Electrocatalytic Oxygen Evolution Reaction on Stable Tailored Ternary MoO₃-NiO-Activated Carbon Hybrid Catalyst; *International Journal of Energy Research*, Accepted 2022. (I.F. 5.1).
- 69] Patil, K.N., Prasad; D., Kakade. B.; **Jadhav, A. H.***; Nagaraja, B. M., State of the Art and Prospective in Transition Metal- Based Heterogeneous Catalysis for selective Hydrogenation of Cinnamaldehyde; (*Submitted*).
- 70] **Jadhav, A. H.***; Jadhav, H.S.; Seo. J.G.; Azido alcohol synthesis from epoxide over

ambient condition (*Submitted*).

- 71] **Jadhav, A. H.***; Jadhav, H.S.; Seo. J.G.; Brønsted Acidic Ionic Liquids Functionalized on Graphene Oxide is Highly Efficient, Selective, and Recyclable Catalyst for Dehydration of Glucose into 5-hydroxymethylfurfural (HMF) (*Submitted*).

POSTERS PRESENTED IN CONFERENCES

- 1] **12th CSIR** National symposium in Chemistry and 4th CSIR-RSC Symposium in Chemistry in February 4-7, 2010 at IICT Hyderabad.
 - 2] Poster presented on “Preparation and application of supramolecular assembled β -cyclodextrin/polyacrylonitrile composite nanofibers as a highly efficient adsorbent for dye removal” in the conference of “**The membrane society of Korea**” at Seoul, South Korea in 2011 (P-49).
 - 3] Poster presented on “Synthesis, Characterization, and Application of Short Oligo Ethylene Glycol Functionalized Dicationic Room Temperature Ionic Liquids Associated with two Different Cations and Lewis and Brønsted acidic Anions” in the conference of “**IUPAC Conference**” at Istanbul, Turkey, in 2013.
 - 4] Poster presented on “Efficient Conversion of Carbohydrates (Fructose and Sucrose) into 5-Hydroxymethylfurfural in Pyridinium Dicationic Ionic Liquid” in the conference of “**IUPAC Conference**” at Istanbul, Turkey, in 2013.
 - 5] Poster presented on “Esterification of Carboxylic Acids with Alkyl Halides at Room Temperature Using Highly Recyclable Tailor-made Dicationic Ionic Liquids Containing *Bis*-trifluoromethane Sulfonimide Anions” in the conference of “**The Seventh Tokyo Conference on Advanced Catalytic Science and Technology**” (TOCAT7) at Kyoto, Japan, in June 2014.
 - 6] Poster presented on “Preparation and Characterization of Palmitoyl Grafted Cellulose Nano Absorbent for the Efficient Adsorption of Pyrene from Aqueous Solution” in “**Nano Korea Symposium 2014**” at Seoul, South Korea, in July 2014.
 - 7] Poster presented on “Preparation and characterization of electro-spun fabricated TiO₂/Ag composite nanofibers and its enhanced photo-catalytic activity for the degradation of Congo red” in “**Nano Korea Symposium 2014**” at Seoul, South Korea, in July 2014. (*Awarded Best Poster Award*).
 - 8] Poster presented on “Synthesis and characterization of AlCl₃ impregnated molybdenum oxide as heterogeneous nano-catalyst for the Friedel-Crafts acylation reaction in ambient condition” in “**Nano Korea Symposium 2014**” at Seoul, South Korea, in July 2014.
- Dr. Arvind H. Jadhav (CV).....**

- 9] Poster presented on Ordered Nano-porous Magnesia-alumina Adsorbents for Temperature Swing Adsorption-desorption of Carbon Dioxide in **“Nano Korea Symposium 2014”** at Seoul, South Korea, in July 2014.
- 10] Poster presented on “Polymer Supported Imidazolium Based Ionic Liquids are Highly Efficient, Green and Recyclable Heterogeneous Catalyst for the Dehydration of Carbohydrate in to 5-Hydroxymethylfurfural (HMF)” in **“Green Solvent Conference 2014”** at Dresden, Germany, in October 2014.
- 11] Poster presented on topic entitled “Microwave Assisted Synthesis of Morphology Controlled MgO Nano Structures Using Ionic Liquid and its Catalytic Activity in Organic Transformation” in **“Nano Korea Symposium 2015” Seoul South Korea”**.
- 12] Poster presented on topic entitled “Synthesis and application of silica fluorescein isothiocyanate (FITC) to detect fluoride ions in organic media” in **6th international symposium on functional materials, August 2014, Singapore.**
- 13] Poster presented on topic entitled “Microwave Assisted Synthesis of Morphology Controlled MgO Nano Structures Using Ionic Liquid and its Catalytic Activity in Organic Transformation” in **Korea Institute of Chemical Engineering Spring Symposium in 2015 at Ilsan, Korea.**
- 14] Poster presented on topic entitled “Eco-friendly Water Mediated Green Protocol for Azido Alcohol Synthesis from Epoxides over Recyclable Polymer Supported Penta-Ethylene Glycol Catalyst in Ambient Conditions” in **Korea Institute of Chemical Engineering Spring Symposium in April-2016 at Busan, Korea.**
- 15] Poster presented on topic entitled “Conversion of fructose into 5-hydroxymethylfurfural (HMF) using eco-friendly choline chloride supported on silica nanoparticles as efficient and recyclable heterogeneous catalyst” **In Nano Korea Symposium in July-2016, Ilsan, Korea.**
- 16] Poster presented on topic entitled “**dicationic ionic liquid assisted synthesized mesoporous zeolite as efficient heterogeneous catalyst for dehydration of fructose into 5-hydroxymethyl furfural (HMF)**” **In Nano Korea Symposium in July-2016, Ilsan, Korea.**
- 17] Poster presented on topic entitled “Cu supported on TiO₂ aerogel catalyst for vapour phase hydrogenation of nitrobenzene to aniline” I. Kainthla¹, J.T. Bhanushali¹, G.V. Ramesh Babu, K. S. Rama Rao, **Arvind H. Jadhav***, B. M. Nagaraja*. **Catalysis Symposium-23-2017, Bangalore, India.**

Efficient Catalyst for Hydrogen Generation from Sodium Borohydride, N. Sandhya, C.R. Chaitra, D. Prasad, I. Kainthla, J.T. Bhanushali, **Arvind H. Jadhav***, B.M. Nagaraja*. **Nano Bangalore International Conference, 2017**, Bangalore, India. (*Awarded Best Poster Award*).

- 19] Poster presented on topic entitled “Hydrogen production by hydrolysis of NaBH₄ using sulphonic acid functionalized PVA/PVDF composite microcapsules, C.R. Chaitra, N. Sandhya, D. Prasad, J.T. Bhanushali, **Arvind H. Jadhav***, B.M. Nagaraja*, International conference on “**Green Methods for Separation, Purification and Nanomaterials Synthesis**”, Jain University, Bangalore-2018.
- 20] Poster presented on topic entitled “Cu supported CeO₂ Catalyst for Vapour Phase Dehydrogenation of 1,4-butanediol to γ - butyrolactone, J.T. Bhanushali, G.V. Ramesh Babu, I. Kainthla, K.S. Rama Rao, **Arvind H. Jadhav***, B.M. Nagaraja* International conference on “**Green Methods for Separation, Purification and Nanomaterials Synthesis**”, Jain University, Bangalore-2018.
- 21] Poster presented on topic entitled “Eminently Competent Recyclable Fe₂O₃ Decorated Oxidized MWCNT Magnetic Catalyst for Highly Efficient Production of Hydrogen via Hydrolysis of NaBH₄, N. Sandhya, C.R. Chaitra, D. Prasad, I. Kainthla, J.T. Bhanushali, **Arvind H. Jadhav***, B.M. Nagaraja*. International conference on “**Green Methods for Separation, Purification and Nanomaterials Synthesis**”, Jain University, Bangalore-2018.
- 22] Poster presented on topic entitled “Hydrogen Free, In-situ Generation of Cu₀ Nanoparticles Supported on TiO₂ Aerogel as a Catalyst for the Vapour Phase Hydrogenation of Nitrobenzene to Aniline, I. Kainthla¹, J.T. Bhanushali¹, G.V. Ramesh Babu, K. S. Rama Rao, Arvind H. Jadhav*, B. M. Nagaraja*. International conference on “**Green Methods for Separation, Purification and Nanomaterials Synthesis**”, Jain University, Bangalore-2018.
- 23] Poster presented on topic entitled “Brønsted Acidic Ionic Liquids Functionalized on Graphene Oxide is Highly Efficient, Selective, and Recyclable Catalyst for Dehydration of Glucose into 5-hydroxymethylfurfural (HMF), **Arvind H. Jadhav***, D. Prasad, J.T. Bhanushali, B.M. Nagaraja*, International conference on “**Green Methods for Separation, Purification and Nanomaterials Synthesis**”, Jain University, Bangalore-2018, Catalysis Symposium-2017, Bangalore, India.

Jadhav, “Base Recyclable Organic- Inorganic Hybrid Catalyst for Solvent-free Valorization of CO₂ into Cyclic Carbonates” presented at **International Conference on Recent Advances in Applied Sciences, Technology & Health-2021** organized by SRM Institute of Science and Technology, Chennai from March 3-5, 2021.

- 25] Poster Presentation: D.Prasad, K.N. Patil, V.K. Manoorkar, B.M. Nagaraja, Arvind H. Jadhav, “Solvent-free Valorization of Greenhouse CO₂ into Value-added Products Using Mesoporous Trimetallic Oxide Scaffold as Versatile Catalyst” presented at **International Conference on Recent Trends in 2D Nanomaterials: Synthesis, Properties and Applications: A Virtual Event** organized by Pune University, Maharashtra, from February 24-26, 2021.
- 26] Oral Presentation: P.M. Srinivasappa, V. K. Manoorkar, S. Kusuma, B. M. Nagaraja, Arvind H. Jadhav, “Solvent-free, One Pot Liquid Phase Synthesis of Oxazolidnone: Through Three Component Reaction of CO₂, Epoxide and Amine by Efficient Porous CuCoNi Mixed Metal Oxide Catalyst” presented at **27th International Conference of International Academy of Physical Sciences on Sustainable Chemistry for Future Technologies** organized by ICT, Mumbai on October 26-28, 2021.
- 27] Oral Presentation: P.M. Srinivasappa, V. K. Manoorkar, S. Kusuma, B. M. Nagaraja, Arvind H. Jadhav, “One-pot Solvent Free Synthesis of Oxazolidinone isomers: Through Three Component Reaction of Amine, Epoxide and CO₂ by Efficient Nano-porous Mixed Metal Oxide Catalyst presented at **Emerging Trends in Catalysis for Sustainable Chemical Processes** organized by IChE- Bangalore Regional Centre, Catalysis Society of India-Bangalore Chapter on August 26-28, 2021.
- 28] K. N. Patil, D. Prasad, V. K. Manoorkar, Arvind H. Jadhav, B.M. Nagaraja, presented at “Exploring the Confined Space and Active Sites of Ni@OCNTs for Chemoselective Hydrogenation of Cinnamaldehyde to Hydrocinnamaldehyde” presented at **International Conference on Recent Trends in 2D Nanomaterials: Synthesis, Properties and Applications**” held at Pune University, Maharashtra on February 24-26, 2021 (Best Poster Presentation).

SPEECH DILIVERED IN CONFERENCES

- 1] Oral presentation delivered on entitle “*The design and development of novel ionic liquids for the chemical and biomass conversion*” in the conference of “**The membrane society of Korea**” at Seoul, South Korea in 2011.

2] Oral presentation delivered on entitled “*Preparation and application of supramolecular*”

assembled β - cyclodextrin/polyacrylonitrile composite nanofibers as a highly efficient adsorbent for dye removal” in the “**International Conference on Nano Science and Technology**” (ICNST-2012) held in Beijing, Republic of China, Sept- 2012.

- 3] Oral presentation delivered on entitled “*Synthesis, Characterization, and Application of Short Oligo Ethylene Glycol Functionalized Dicationic Room Temperature Ionic Liquids Associated with two Different Cations and Lewis and Brønsted acidic*” in the conference of “**IUPAC Conference**” at Istanbul, Turkey, in 2013.
- 4] Oral presentation delivered on entitled “*Esterification of Carboxylic Acids with Alkyl Halides at Room Temperature Using Highly Recyclable Tailor-made Dicationic Ionic Liquids Containing Bis-trifluoromethane Sulfonyl Anions*” in the conference of “**Korea Society of Industrial and Engineering Chemistry Conference 2014**” at Daegu, Republic of Korea.
- 5] Oral presentation delivered on entitled “*Microwave-assisted Synthesis of MgO Nanostructures Using Various Ionic Liquids and Its Catalytic Activity in Organic Transformation*” in the conference of “**Korea Society of Industrial and Engineering Chemistry Conference April-2015**” at Jeju, Republic of Korea.
- 6] Oral presentation delivered on entitled “*Polymer Supported Ionic Liquids: Highly Efficient, Green Recyclable Catalyst for the Cyclic Carbonate Formation from Epoxide and Carbon Dioxide*” in the **Korea-Japan Symposium Conference, May - 2015**” at Busan, Republic of Korea.
- 7] Oral presentation delivered on entitled “*Brønsted Acidic Ionic Liquids Functionalized on Graphene Oxide is Highly Efficient, Selective, and Recyclable Catalyst for Dehydration of Glucose into 5-hydroxymethylfurfural (HMF)*” in “**Korea Society of Industrial and Engineering Chemistry Conference, April-2016**” at Busan, Republic of Korea.
- 8] Delivered an invited talk on “*Sustainable Transformation of CO₂ and Epoxide into cyclic carbonate in solvent free condition catalyzed by ionic liquid functionalized activated charcoal*, in **International conference on Applied Sciences (ICAS-2017) at Latur, Maharashtra, India.**
- 9] Guest Lecture delivered on entitled “**Green Chemistry and Applications**” at Vasant Mahavidyalaya, Kaij, Dist-Beed, Maharashtra, India, Feb-2018”.
- 10] Guest Lecture delivered on entitled “**Sustainable Transformations of CO₂ and epoxide into cyclic carbonates**” at Physics Department, Savitribai Phule Pune University, Pune, India, 12-Feb-2018”.

and Future Research Scope” at

Maharashtra Udayagiri Mahavidyalaya, Udgir, India, 22-12-2018 on Math Day-2018 Occasion.

- 12] Oral presentation delivered on entitled “Catalytic Fixation of Carbon Dioxide (CO₂) into Organic Molecule: Controlling Reaction for Global Warming” in “National Conference on Frontiers of Catalysis Science & Technology and its Applications (**FOCSTA-10,11, Jan- 2020**)” at Bangalore India.
- 13] Invited speech delivered on “**Nano-catalytic fixation of CO₂ into organic molecules: catalytic approaches and future prospects**” in national webinar organized by Dept. of Chemistry, Shri Madhavrao Patil Mahavidyalaya. Maharashtra, India, on 11-July-2021.
- 14] Invited speech delivered on “**Green Chemistry and Global Warming: Challenges and Opportunity**” in national webinar organized by Dept. of Chemistry, Mahatma Basweshwar Mahavidyalay, Latur, Maharashtra, India, on 22-01-2022.

TECHNICAL SKILLS

- ❖ Catalytic biomass conversion using homogeneous and heterogeneous catalysts such as porous metal oxides, ionic liquids, shape controlled nano materials, & etc.
- ❖ Expertise in high pressure and vapour phase reactions for biomass conversion and CO₂ conversion.
- ❖ Expertise in design and execute short-step synthesis of targeted green chemistry approaches of organic molecules or ionic liquids.
- ❖ Development of novel organic synthetic methodologies for biomass conversion and utilization as well as CO₂ adsorption and conversion.
- ❖ Characterization using XRD, TEM, SEM, TGA, DSC, EDX, XPS and polymer synthesis and characterization.
- ❖ Good ability in characterization of organic compounds through various techniques such as GC, GC-MS, ¹H NMR, ¹³C NMR, MASS, Raman, IR, UV Spectroscopy methods.
- ❖ Separation of products using various separation techniques such as column chromatography, preparative TLC, HPLC, GC.
- ❖ Electrospinning techniques for the synthesis of nanofibers and mats.
- ❖ Carried out various reactions including functional group transformations as well as scaling-up of reactions from milligrams to grams scale.
- ❖ Ability to work independently as well as in groups and familiar with all types of commonly used computer software.
- ❖ Expertise in handling air and moisture sensitive reactions and having ability to work on high pressure reactions as well as in supercritical reactor.

SACCTIONED PROJECTS

Sr. No.	Project Title	Principle Investigator	Working Researchers	Funding Agency	Year
01	Sustainable Selective Electrocatalytic CO ₂ Reduction into Value Added Products Using Tailored Metal Complexes as Electrode Materials"	Arvind H. Jadhav	1) Puneeth Kumar M.S. 2) Navya A. Raju	DST-SERB	2021

02.	Novel metal organic framework (MOF) catalysed conversion of CO ₂ into value added product. India	Arvind H. Jadhav Jain	1) Puneeth Kumar M.S. University, Bangalore, 2021 2) Rohit Nikam		
03.	Method for Catalytic Transformation of Carbon Dioxide into Value-added Products using Trimetallic Oxide Scaffolds Bangalore, India	Arvind H. Jadhav	1) Puneeth Kumar Jain M.S. University, Bangalore, 2021		
04	Biomass derived carbon materials as an electrode material for electrochemical applications	Arvind H. Jadhav Jain	1) Komal N. Patil Jain University, Bangalore, India 2019-2020		
05.	Sustainable hydrogengeneration using novel polymer based catalysts Arvind H. Jadhav Jain Bangalore, India 2019	Arvind H. Jadhav Jain	1) Navya A. Raju		
06.	Biomass conversion and utilisation using novel based materials India	Arvind H. Jadhav Jain	1) Komal N. Patil Jain University, Bangalore, 2018 2) Jayesh T. Bhanushali		
07.	Novel Ionic Liquids porous materials for sustainable fixation of CO ₂ into organic molecules India	Jain Arvind H. Jadhav	1) Divya Prasad Arvind H. Jadhav Jain University, 2017 2) Vilas Manoorakar Bangalore,		

PERSONAL DETAILS

PERMANENT ADDRESS

<ul style="list-style-type: none"> ❖ Date of Birth : 07-07-1985 ❖ Nationality : Indian ❖ Hobbies : Reading books, newspaper, & traveling ❖ Marital status : Married ❖ Gender : Male ❖ Languages : English, Hindi, Marathi, ❖ Passport No. : H3663313. 	<p>Dr. Arvind Hanmantrao Jadhav, Geetai Nivas, Shahoo Chouk, Samata Nagar, Dam Road, Udgir, Tq - Udgir, PIN. No-413517, Dist: Latur, State: Maharashtra, India. Phone No. -+919405783939</p>
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DECLARATION					
I hereby declare that the information provided above is true to the best of my knowledge.					
					
				Dr. Arvind H. Jadhav	
