

List of Publications

1. "Graphene oxide immobilized Copper(II) Schiff base complex [GO@AF-SB-Cu]: A versatile catalyst for Chan-Lam coupling reaction", A. Kumar, S. Layek, B. Agrahari, S. Kujur, D. D. Pathak, *ChemistrySelect* 2019, **4**, 1337, DOI: **10.1002/slct.201803113**
2. "Synthesis and characterization of guanine-functionalized mesoporous silica [SBA-16-G]: a metal-free and recyclable heterogeneous solid base catalyst for synthesis of pyran-annulated heterocyclic compounds", R. Gupta, S. Layek, D. D. Pathak, *Research on Chemical Intermediates*, DOI: 10.1007/s11164-018-3693-5, DOI: **10.1007/s11164-018-3693-5**
3. B. Agrahari, S. Layek, R. Ganguly, D. D. Pathak "Synthesis and crystal structures of salen-type Cu(II) and Ni(II) Schiff base complexes: Application in [3+2]-Cycloaddition and A³-coupling reactions", *New J. Chem.*, 2018, **42**, 13754-13762, DOI: **10.1039/C8NJ01718B**
4. "[Zn(L-proline)₂] catalyzed one-pot green synthesis of propargylamines under solvent-free condition" S. Layek, B. Agrahari, S. Kumari, Anuradha, and D. D. Pathak, *Catalysis Letters*, 2018, **148**, 2675, DOI: **10.1007/s10562-018-2449-6**
5. "Unprecedented formation of a μ -oxobridged polymeric copper(II) complex: Evaluation of catalytic activity in synthesis of 5-substituted 1*H*-tetrazoles", S. Layek, R. Ganguly, D. D. Pathak, *J. Organometal. Chem.*, 2018, **870**, 16, DOI: **10.1016/j.jorganchem.2018.06.004**
6. "Synthesis, crystal structures, and application of two new pincer type palladium(II)-Schiff base complexes in C-C cross-coupling reactions", B. Agrahari, S. Layek, Anuradha, R. Ganguly, D. D. Pathak, *Inorganic. Chimic. Acta*, 2018, **471**, 345. DOI: **10.1016/j.ica.2017.11.018**
7. "Studies on Combustion of Hard Coke Using Different Additives", S. K. Mondal, D.D. Pathak, Jagdish, *Int. J. App. Eng. Res.*, 2018, **13**, 16919
8. "Processes developed for the separation of europium (Eu) from various resources", A. Kumari, M. K. Jha, D. D. Pathak, S. Chakravarty, J. C. Lee, *Separation and Purification Reviews*, 2018, DOI: **10.1080/15422119.2018.1454959**
9. "Review on the Processes for the Recovery of Rare Earth Metals (REMs) from Secondary Resources" A. Kumari, M. K. Jha, D. D. Pathak, *Rare Metal Technology*, 2018, DOI: **10.1007/978-3-319-72350-1-5**
10. "Processing of monazite leach liquor for the recovery of light rare earth metals (LREMs)" Kumari, A., Jha, S., Patel, J.N., Chakravarty, S., Jha, M.K., Pathak, D.D., *Miner Engineering*, 2018, **129**, 9. DOI: **10.1016/j.mineng.2018.09.008**

11. "Single pot fabrication of N doped reduced GO (N-rGO) /ZnO-CuO nanocomposite as an efficient electrode material for supercapacitor application", C. K. Maitya , G. Hatuia, K. Vermab, G. Udayabhanu, D.D. Pathak , G. C. Nayak, Vacuum 157 (2018) 145-154,

DOI: 10.1016/j.vacuum.2018.08.019

12. "Extraction of rare earth metals (REMs) by organo-metallic complexation using PC 88A", Kumari, A., Panda, R., Jha, M.K., Pathak, D.D., Comptus Rendus Chimie, 2018, **21**, 1029.

DOI: 10.1016/j.crci.2018.09.005

13. "Evaluation of metal contamination and risk assessment to human health in a coal mine region of India: A case study of the north karanpura coalfield", B. Neogy, A. K. Tewary, A. K. Singh, **D. D. Pathak**, Human and Ecological risk assessment, 2018, **DOI: 10.1080/10807039.2018.1436434**

14. "Water quality assessment of ground water samples using water quality index method of north karanpura coalfield, Jharkhand", B. Neogy, A. K. Singh, **D. D. Pathak**, International J Chem Tech Res 2017, 10, 67.

15. "Palladium nanoparticles immobilized on a magnetic Chitosan-anchored Schiff base: Application in Suzuki-Miyaura and Heck-Mizoroki coupling reactions", Anuradha, S. Kumari, S. Layek, and **D. D. Pathak**, *New J. Chem.*, 2017, 41, 5595-6604, **DOI:10.1039/C7NJ00283A**

16. "Synthesis and crystal structures of salen-type Cu(II) and Ni(II) Schiff base complexes: Application in [3+2]-Cycloaddition and A³-coupling reactions", B. Agrahari, S. Layek, R. Ganguly, **D. D. Pathak**, *New J. Chem.*, 2018, 42, 13754-13762 , **DOI:10.1039/C8NJ01718B**

17 "Synthesis and Characterization of a new Pd(II)-Schiff base complex [Pd(APD)₂]: An efficient and recyclable catalyst for Mizoroki-Heck and Suzuki-Miyaura reactions", S. Layek, Anuradha, B. Agrahari and **D. D. Pathak**, *J. Organomet. Chem*, 2017, 846, 105-112, **DOI: 10.1016/j.jorganchem.2017.05.049**

18. " Hydrogeochemistry of coal mine water of north karanpura coalfield, India: Implication for solute acquisition processes, dissolved, fluxes and water quality assessment", B. Neogy, A. K. Singh, **D. D. Pathak**, A. Chaturvedi, *Environmental Earth Sciences*, 2017, **76**, 489.

19. "Chitosan-supported Copper(II)-Schiff base complexes: Applications in synthesis of 5-substituted 1Htetrazoles and oxidative homo-coupling of terminal alkynes" Anuradha, S. Layek, B. Agrahari and **D. D. Pathak**, *Chemistry Select*, **Chemistry Select**, 2017, **2**, 6865, **DOI: 10.1002/slct.201701252**

20. "Synthesis, spectroscopic and single crystal X-ray studies on three new mononuclear Ni(II) pincer type complexes: DFT calculations and their antimicrobial activities", S. Layek, B. Agrahari, A. Tarafdar, C. Kumari, Anuradha, , R. Ganguly and **D. D. Pathak**, *J. of Mol. Struct.* 2017, **1141**, 428-435, DOI:10.1016/j.molstruc.2017.03.114
21. "Room-Temperature In-Situ Design and Use of Graphene Oxide-SBA-16 Composite for Water Remediation and Reusable Heterogeneous Catalysis", H. Chaudhuri, S. Dash, R. Gupta, **D. D. Pathak**, and A. Sarkar, *Chem. Select*, 2017, **2**, 1835-1842. DOI: **10.1002/slct.201601817**
22. "Template-free single pot synthesis of SnS₂@Cu₂O/ reduced graphene oxide (rGO) nanoflowers for high performance super capacitors" G. Hatui, G. C. Nayak, G. Udayabhanu, Y. K. Mishrab and **D. D. Pathak**, *New J. Chem.*, 2017, **41**, 2702-2716, DOI: **10.1039/C6NJ02965E**
23. "Synthesis, characterization and crystal structure of Cu(II) complex of trans-cyclohexane-1,2-diamine: Application in synthesis of symmetrical biaryls", B. Agrahari, S. Layek, S. Kumari, Anuradha, R. Ganguly and **D. D. Pathak**, *J. of Mol. Struct.* 2017, **1134**, 85-90, DOI: **10.1016/j.molstruc.2016.12.053**
24. "Chitosan supported Zn(II) mixed ligand complexes as heterogeneous catalysts for one-pot synthesis of amides from ketones via Beckmann rearrangement", Anuradha, S. Kumari, S. Layek and **D. D. Pathak**, *J. of Mol. Struct.* 2017, **1130**, 368-373, DOI: **10.1016/j.molstruc.2016.10.053**
25. "Synthesis, characterization and crystal structure of a diketone based Cu(II) complex and its catalytic activity for the synthesis of 1,2,3-triazoles", S. Layek, S. Kumari, Anuradha, B. Agrahari, R. Ganguly and **D. D. Pathak**, *Inorg. Chim. Acta* 2016, **453**, 735-741. DOI: **10.1016/j.ica.2016.09.048**
26. "Graphene oxide-TiO₂ composites: an efficient heterogeneous catalyst for the green synthesis of pyrazoles and pyridines", S. Kumari, A. Sekhar, **D. D. Pathak**, *New J. Chem.*, 2016, **40**, 5053, DOI: **10.1039/C5NJ03380B**
27. "Synthesis and characterization of Cu(II) Schiff base complex immobilized on graphene oxide and its catalytic application in the green synthesis of propargylamines", S. Kumari, A. Sekhar, **D. D. Pathak**, *RSC Adv.*, 2016, **6**, 15340, DOI: **10.1039/C5RA25209A**
28. "Recovery of copper and recycling of acid from the leach liquor of discarded Printed Circuit Boards (PCBs)", P. K. Choubey, R. Panda, M. K. Jha, J. C. Lee, and **D.D. Pathak**, *Sep. Purif. Technol.*, 2015, **156**, 269, DOI: **10.1016/j.seppur.2015.10.012**

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31. "Ultrasound-Promoted Synthesis of 9-Aryl-1,8-dioxo-octahydroxanthenes Using TiO₂ as a Cheap and Reusable Catalyst", S. Kumari, A. Shekhar and **D. D. Pathak**, *Chem. Sci. Trans.*, 2014, **3**, 652-663. DOI: **10.7598/cst2014.783**
32. "Multi-Nuclear NMR Investigation of Nickel(II), Palladium(II), Platinum(II) and Ruthenium(II) Complexes of an Asymmetrical Ditertiary Phosphine", Gerald Joe. J. R., **Pathak, D. D.**; Kapoor, P. N. *J. Korean Chem. Soc.* 2013, **57**, 726-730, DOI: **10.5012/jkcs.2013.57.6.726**
33. "Chloro(η^3 -allyl)dicarbonylmolybdenum(II) Complexes of Some Chiral and Achiral Ditertiaryphosphines", Gerald Joe. J. R., **Pathak, D. D.**; Kapoor, P. N. *Cent. Eur. J. Chem.* 2012, **10**, 165-171.
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40. "Recent Advances in Development of eco-friendly solid composite propellants for rocket propulsion", Mahanta, A. K.; **Pathak, D. D.**, *Res. J. Chem. Env.* 2010, **14**, 94-103.
41. "Effects of Fly Ash and Marble Waste addition of on Thermo-mechanical properties of Earthenware Wall Tile Composition", Chakraborty, A. K.; Maiti, K. N.; **Pathak, D. D.**, *Industrial Ceramics* 2009, **29**, 157-164.
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48. "Reactions of Coordinated Phosphines and Arsines. Iron (II)-Faciliated and Direct Syntheses of Three- to Seven-Membered Heterocycles Containing Phosphorus an Arsenic. Crystal Structure of Iron(II) complexes of 1-Phenylphosphetane and 1-phenylarsetane", Barder, A.; Kang, Y. B.; Pabel, M.; **Pathak, D. D.**; Willis, A. C. *Organometallics* 1995, **14**, 1434-1441, DOI: 10.1021/om00003a051
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51. "An unprecedented Mode of Co-ordination of BINAP ligand: Synthesis and Crystal Structure of $[\text{Ru}(\eta^5\text{-C}_5\text{H}_5)\{(\text{R})\text{-BINAP}\}]^+\text{CF}_3\text{SO}_3^-$ and $[\text{Ru}(\eta^5\text{-C}_5\text{H}_5)\{(\text{R})\text{-BINAP}\}\text{I}]$ ", **Pathak, D. D.**; Adams, H.; Bailey, N. A.; King, P. J.; White, C. *J. organomet. Chem.* 1994, **479**, 237-245, DOI: **10.1016/0022-328X(94)84115-2**.
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53. $(\eta^3\text{-allylic})$ Dicarbonylmolybdenum(II) Complexes of the Unsymmetrical Ditertiary Phosphines, $\text{Ph}_2\text{PCH}_2\text{CH}_2\text{P}(\text{C}_6\text{H}_4\text{X})_2$ ($\text{X}=\text{m-F}$, p-F or m-CF_3), Kapoor, P. N.; **Pathak, D. D.**; Gaur, G.; Mercykutty, P.C. *J. Organomet. Chem.* 1987, **322**, 71-75, DOI: **10.1016/0022-328X(87)85025-8**
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57. "Synthesis of Three New Ditertiary Phosphines: 1-Diphenylphosphino-2-bis(m -fluorophenyl)phosphinoethane, 1-Diphenylphosphino-2-bis(p -fluorophenyl) phosphinoethane, 1-Diphenylphosphino-2-bis(m -trifluoromethylphenyl)phosphinoethane", Kapoor, P. N.; **Pathak, D. D.**; Gaur, G.; Mercykutty, P.C. *J. Organomet. Chem.* 1984, **276**, 167-170, DOI: **10.1016/0022-328X(84)80627-0**.

Chapter in Book:

1. A. K. Mahanta and **D. D. Pathak**, Chapter 11 in Book Polyurethane, “**HTPB-Polyurethane: A Versatile Fuel Binder For Composite Solid Propellant**” ISBN 979-953-307-642-2, edited by. **Dr. Fahmina Zafar**, Open Access Publisher, **2012**, <http://dx.doi.org/10.5772/47995>