

Publication of Research Papers in National and International Journals

PG & Research Department of Chemistry

- J. Ravichandran, P. Gurumoorthy, C. Karthick, A. Kalilur Rahiman, Mononuclear zinc(II) complexes of 2-((2-(piperazine-1-yl)ethylimino)methyl)-4- substituted phenols: Synthesis, structural characterization, DNA binding and cheminuclease activities, *J. Mol. Struct.* 1062 (2014) 147-157 (Publisher: Elsevier, Impact Factor: 1.599)
- P. Gurumoorthy, J. Ravichandran, A. Kalilur Rahiman, Mixed-ligand binuclear copper(II) complex of 5-methylsalicylaldehyde and 2,2'- bipyridyl: Synthesis, crystal structure, DNA binding and nuclease activity, *J. Chem. Sci.* 126 (2014) 783-792, (Publisher: Springer, Impact Factor: 1.298)
- C. Karthick, P. Gurumoorthy, M.A. Imran Musthafa, Rachita Lakra, Purna Sai Korrapati, A. Kalilur Rahiman, Dinuclear phenoxo-bridged "end-off" complexes containing a piperazine that shows chemical nuclease and cytotoxic activities, *J. Coord. Chem.* 67 (2014) 1794-1808, (Publisher: Taylor & Francis, Impact Factor: 1.932)
- P. Arthi, A. Haleel, P. Srinivasan, D. Prabhu, C. Arulvasu, A. Kalilur Rahiman, Antibacterial, DNA interaction and cytotoxic activities of pendant-armed polyamine macrocyclic dinuclear nickel(II) and copper(II) complexes, *Spectrochim. Acta, Part A* 129 (2014) 400-414, (Publisher: Elsevier, Impact Factor: 1.770)
- J. Ravichandran, P. Gurumoorthy, M.A. Imran Musthafa, A. Kalilur Rahiman, Antioxidant, DNA binding and nuclease activities of heteroleptic copper(II) complexes derived from 2-((2-(piperazin-1-yl)ethylimino)methyl)-4-substituted phenols and diimines, *Spectrochim. Acta, Part A* 133 (2014) 785-793, (Publisher: Elsevier, Impact Factor: 1.770)
- P. Gurumoorthy, D. Mahendiran, D. Prabhu, C. Arulvasu, A. Kalilur Rahiman, Magneto-structural correlation, antioxidant, DNA interaction and growth inhibition activities of new chloro-bridged phenolate complexes, *RSC Adv.* 4 (2014) 42855-42872, (Publisher: RSC, Impact Factor: 3.708)
- A. Haleel, P. Arthi, N. Dastagiri Reddy, V. Veena, N. Sakthivel, Y. Arun, P.T. Perumal, A. Kalilur Rahiman, DNA-binding, molecular docking and apoptotic inducing activity of nickel(II), copper(II) and zinc(II) complexes of pyridine-based tetrazolo[1,5-a]pyrimidine ligands, *RSC Adv.* 4 (2014) 60816-60830, (Publisher: RSC, Impact Factor: 3.708)
- P. Arthi, S. Shobana, P. Srinivasan, A. Kalilur Rahiman, Synthesis, antibacterial, docking and anticancer evaluation of N-substituted, benzoyl derivatives, *J. Chosun Natural Sci.* 7 (2014) 241-25, (Publisher: Korea Science, Impact Factor: 0.440)
- P. Gurumoorthy, D. Mahendiran, D. Prabhu, C. Arulvasu, A. Kalilur Rahiman, Mixed-ligand copper(II) phenolate complexes: Synthesis, spectral characterization, phosphate-hydrolysis, antioxidant, DNA interaction and cytotoxic studies, *J. Mol. Struct.* 1080 (2015) 88-98, (Publisher: Elsevier, Impact Factor: 1.599)
- P. Gurumoorthy, A. Kalilur Rahiman, Phosphate-hydrolysis, antioxidant, DNA binding and nuclease activities promoted by heteroleptic nickel(II) phenolate complexes, *Med. Chem. Res.* 24 (2015) 2441-245, (Publisher: Springer, Impact Factor: 1.612)
- Dilaveez Rehana, A. Haleel, A. Kalilur Rahiman, Hydroxy, carboxylic and amino acid functionalized superparamagnetic iron oxide nanoparticles: Synthesis, characterization and in vitro anticancer studies, *J. Chem. Sci.* 127 (2015) 1155-1166, (Publisher: Springer, Impact Factor: 1.298)
- D. Mahendiran, P. Gurumoorthy, K. Gunasekaran, R. Senthil Kumar, A. Kalilur Rahiman, Structural modeling, in vitro antiproliferative activity, and the effect of

substituents on the DNA fastening and scission actions of heteroleptic copper(II) complexes with terpyridines and naproxen *New J. Chem.* 39 (2015) 7895-7911, (Publisher: RSC, Impact Factor: 3.086)

- P. Arthi, S. Shobana, P. Srinivasan, D. Prabhu, C. Arulvasu, A. Kalilur Rahiman, Dinuclear manganese(II) complexes of hexaazamacrocycles bearing N-benzoylated pendant separated by aromatic spacers: Antibacterial, DNA interaction, cytotoxic and molecular docking studies, *J. Photochem. Photobiol. B* 153 (2015) 247-260, (Publisher: Elsevier, Impact Factor: 2.960)
- U. Muhammed Rafi, D. Mahendiran, A.K. Haleel, R.P. Nankar, M. Doble, A. Kalilur Rahiman, New pyridazine-based binuclear nickel(II), copper(II) and zinc(II) complexes as prospective anticancer agents, *New J. Chem.* 40 (2016) 2451-2465, (Publisher: RSC, Impact Factor: 3.086).
- P. Gurumoorthy, D. Mahendiran, A. Kalilur Rahiman, Theoretical calculations, DNA interaction, topoisomerase I and phosphatidylinositol-3-kinase studies of water soluble mixed-ligand nickel(II) complexes, *Chem. Biol. Interact.* 248 (2016) 21-35, (Publisher: Elsevier, Impact Factor: 2.577).
- D. Mahendiran, R.S. Kumar, V. Viswanathan, D. Velmurugan, A. Kalilur Rahiman, Targeting of DNA molecules, BSA/c-Met tyrosine kinase receptors and anti-proliferative activity of bis(terpyridine)copper(II) complexes, *Dalton Trans.* 45 (2016) 7794-7814, (Publisher: RSC, Impact Factor: 4.197).
- A. Haleel, D. Mahendiran, V. Veena, N. Sakthivel, A. Kalilur Rahiman, Antioxidant, DNA interaction, VEGFR2 kinase, topoisomerase I and in vitro cytotoxic activities of heteroleptic copper(II) complexes of tetrazolo[1,5-a] pyrimidines and diimines, *Mater. Sci. Eng. C* 68 (2016) 366-382, (Publisher: Elsevier, Impact Factor: 3.088)
- D. Mahendiran, G. Vinitha, S. Shobana, V. Viswanathan, D. Velmurugan, A. Kalilur Rahiman, Theoretical, photophysical and biological investigations of an organic charge transfer compound 2-aminobenzimidazolium-2-oxyisoindolate-1,3-dione-2-hydroxyisoindoline-1,3-dione, *RSC Adv.* 6 (2016) 60336-60348, (Publisher: RSC, Impact Factor: 3.708)
- Rehana, D., Mahendiran, D., Kumar, R.S, A. Kalilur Rahiman, In vitro antioxidant and antidiabetic activities of zinc oxide nanoparticles synthesized using different plant extracts, *Bioprocess Biosyst Eng* (2017) 40: 943. <https://doi.org/10.1007/s00449-017-1758-2>
- D. Mahendiran, G. Subash, D. Arumai Selvan, Dilaveez Rehana, R. Senthil Kumar, A. Kalilur Rahiman, Biosynthesis of Zinc Oxide Nanoparticles Using Plant Extracts of *Aloe vera* and *Hibiscus sabdariffa*: Phytochemical, Antibacterial, Antioxidant and Anti-proliferative Studies, *BioNanoSci.* (2017) 7: 530. <https://doi.org/10.1007/s12668-017-0418-y>
- S. Jayakumar, D. Mahendiran, Dilaveez Rehana, A. Kalilur Rahiman, Heteroleptic metal(II) complexes of hydrotris(methimazolyl)borate and diimines: Synthesis, theoretical calculations, antimicrobial, antioxidant, *in vitro* cytotoxicity and molecular docking studies, *Microbial Pathogenesis* Volume 109, August 2017, Pages 120-130.
- Dharmasivam Mahendiran, Raju, Senthil Kumar, Vijayan, Viswanathan, Devadasan Velmurugan, Aziz Kalilur Rahiman, In vitro and in vivo anti-proliferative evaluation of bis(4'-(4-tolyl)-2,2':6',2''-terpyridine)copper(II) complex against Ehrlich ascites carcinoma tumors, *JBIC Journal of Biological Inorganic Chemistry*, 2017, Volume 22, Issue 7, pp 1109–1122.
- C. Karthick, K. Karthikeyan, Purna Sai Korrapati, A. Kalilur Rahiman, Antioxidant, DNA interaction, molecular docking and cytotoxicity studies of aminoethylpiperazine-containing macrocyclic binuclear copper(II) complexes, *Applied organometallic chemistry* Volume 31, Issue 8 August 2017 e3669

- Dilaveez Rehanaa D.Mahendiran R. SenthilKumar A. Kalilur Rahiman, Evaluation of antioxidant and anticancer activity of copper oxide nanoparticles synthesized using medicinally important plant extracts, *Biomedicine & Pharmacotherapy* Volume 89, May 2017, Pages 1067-1077.
- DharmasivamMahendiran Raju Senthil Kumar Aziz Kalilur Rahiman, Heteroleptic silver(I) complexes with 2,2':6',2''-terpyridines and naproxen: DNA interaction, EGFR/VEGFR2 kinase, growth inhibition and cell cycle arrest studies, *Materials Science and Engineering: C* Volume 76, 1 July 2017, Pages 601-615
- A. Haleel D.Mahendiran V.Veena N.Sakthivel A. Kalilur Rahiman, Antioxidant, DNA interaction, VEGFR2 kinase, topoisomerase I and in vitro cytotoxic activities of heteroleptic copper(II) complexes of tetrazolo[1,5-a]pyrimidines and diimines, *Materials Science and Engineering: C* Volume 68, 1 November 2016, Pages 366-382
- Rasheeth AhamedK, Lakshmi Krisnamoorthy, Karthick S, Aqueous mediated diels alder reaction: A simple route to the synthesis of piperazine derivatives, *Yanbu journal of engineering and science* vol 9 2014 pg no 13-18.
- N. Mohamed Basitha, J. JudithVijaya, L. John Kennedy, M.Bououdinad, Structural, morphological, optical, and magnetic properties of Ni-doped CuO nanostructures prepared by a rapid microwave combustion method, *Materials Science in Semiconductor Processing*, Volume 17, January 2014, Pages 110-118.
- N. Mohamed Basith, J. JudithVijaya, L. JohnKennedy, M.Bououdina, S.Jenefar, V.Kaviyaran, Co-Doped ZnO Nanoparticles: Structural, Morphological, Optical, Magnetic and Antibacterial Studies, *Journal of Materials Science & Technology*, Volume 30, Issue 11, November 2014, Pages 1108-1117
- Mohamed Basith, N, Judith Vijaya, J.; John Kennedy, L.; Bououdina, M.; Shenbhagaraman, R.; Jayavel, R, Influence of Fe-Doping on the Structural, Morphological, Optical, Magnetic and Antibacterial Effect of ZnO Nanostructures, *Journal of Nanoscience and Nanotechnology*, Volume 16, Number 2, February 2016, pp. 1567-1577(11)
- T.K.Shabeer, Kinetics of free radical polymerisation of methylacrylate initiated by potassium peroxydisulphate and cetylpyridinium chloride system, *International Journal of Current Research*, 2015, 7, 13826-30, (0975-833X)
- T.K.Shabeer, Synthesis, Characterization and evaluation of antimicrobial properties and quantum chemical characterization of 3, 4-dihydropyrimidinones, *International Journal Pharma & Biosciences*, 2015,6,522-543.
- A.Kalilur Rahiman, Mononuclear zinc(II) complexes of 2-((2 (piperazine-1-yl)ethylimino)methyl)-4-substituted phenols:Synthesis, structural characterization, DNA binding and cheminuclease activities, *J. Mol. Struct.* 1062 (2014) 147-157.
- A.Kalilur Rahiman, Mixed-ligand binuclear copper(II) complex of 5-methylsalicylaldehyde and 2,2'-bipyridyl: Synthesis, crystal structure, DNA binding and nuclease activity, *J. Chem. Sci.* 126 (2014) 783-792.
- A.Kalilur Rahiman, Dinuclear phenoxo-bridged "end-off" complexes containing a piperazine that shows chemical nuclease and cytotoxic activities, *J. Coord. Chem.* 67 (2014) 1794-1808.
- A.Kalilur Rahiman, Antibacterial, DNA interaction and cytotoxic activities of pendant-armed polyamine macrocyclic dinuclear nickel(II) and copper(II) complexes *Spectrochim. Acta, Part A* 129 (2014) 400-414.

- A.Kalilur Rahiman, Antioxidant, DNA binding and nuclease activities of heteroleptic copper(II) complexes derived from 2-((2-(piperazin-1-yl)ethylimino)methyl)-4-substituted phenols and diimines, *Spectrochim. Acta, Part A* 133 (2014) 785-793.
- A.Kalilur Rahiman, Magneto-structural correlation, antioxidant, DNA interaction and growth inhibition activities of new chloro-bridged phenolate complexes *RSC Adv.* 4 (2014) 42855-42872.
- A.Kalilur Rahiman, DNA-binding, molecular docking and apoptotic inducing activity of nickel(II), copper(II) and zinc(II) complexes of pyridine-based tetrazolo[1,5-a]pyrimidine ligands *RSC Adv.* 4 (2014) 60816-60830.
- A.Kalilur Rahiman, Synthesis, antibacterial, docking and anticancer evaluation of N-substituted benzoyl derivatives, *J. Chosun Natural Sci.* 7 (2014) 241-252.
- A.Kalilur Rahiman, Mixed-ligand copper(II) phenolate complexes: Synthesis, spectral characterization, phosphate-hydrolysis, antioxidant, DNA interaction and cytotoxic studies, *J. Mol. Struct.* 1080 (2015) 88-98.
- A.Kalilur Rahiman, Hexaaquamanganese(II) bis[hydrotris(3-methyl-2-thioxo-1-imidazolyl)borate] tetrahydrate: A non-coordinating borate ligand with manganese(II) metal ion *Mol. Cryst. Liq. Cryst.* 608 (2015) 190-197.
- A.Kalilur Rahiman, Synthesis, characterization, biological evaluation and docking studies of macrocyclic binuclear manganese(II) complexes containing 3,5-dinitrobenzoyl pendant arms *Spectrochim. Acta, Part A* 143 (2015) 49-58.
- T.Eswara Yuvaraj, *Bioorganic and Medicinal Chemistry Letters*, 2014, 24, 3057-3063
- Mohamed Hanipha, Statistical evaluation of ground water quality in and around Dindigul town, TN, *Advances in Applied Journal research*, 0976-8610.
- A.Shanavas, Polyhedral oligomeric silsesquioxane/polyamide bio nanocomposite membranes: structure-gas transport properties, *RSC Advances*, 10.1039/C4RA12716A.
- A.Shanavas, Performance of novel hyperbranched poly(aryl-ether-urea)s doped with N3-dye in nanocrystalline DSSC, *Journal of Applied Polymer Science*, 10.1002/app.40408.
- Mohamed Ahadu Shareef, Synthesis, characterization and In-Vitro cytotoxic study of novel ligands and their metal complexes 6 ((2)), 56-70, *Der Chemica Sinica*