

List of Publications

2013

1. R. Ramirez-Contreras; N. **Bhuvanesh**; J. Zhou; and O. V. Ozerov. "Synthesis of a Silylium Zwitterion." *Angew. Chem., Int. Ed.*: Ahead of Print.
2. M. Nagaraj; D. Perumal; M. Boominathan; S. Muthusubramanian; and N. **Bhuvanesh**. "Selenium dioxide reaction of substituted diphenacyl sulfides: generation of α -ketoacids." *J. Sulfur Chem.*: Ahead of Print.
3. M. Boominathan; N. Pugazhenthiran; M. Nagaraj; S. Muthusubramanian; S. Murugesan; and N. **Bhuvanesh**. "Nanoporous Titania-Supported Gold Nanoparticle-Catalyzed Green Synthesis of 1,2,3-Triazoles in Aqueous Medium." *ACS Sustainable Chem. Eng.*: Ahead of Print
4. D. Senthil Raja; E. Ramachandran; N. S. P. **Bhuvanesh**; and K. Natarajan. "Synthesis, structure and in vitro pharmacological evaluation of a novel 2-oxo-1,2-dihydroquinoline-3-carbaldehyde (2'-methylbenzoyl) hydrazone bridged copper(II) coordination polymer." *Eur. J. Med. Chem.* 64, (2013): 148-159.
5. E. Ramachandran; D. Senthil Raja; N. S. P. **Bhuvanesh**; and K. Natarajan. "Synthesis, characterization and in vitro pharmacological evaluation of new water soluble Ni(II) complexes of 4N-substituted thiosemicarbazones of 2-oxo-1,2-dihydroquinoline-3-carbaldehyde." *Eur. J. Med. Chem.* 64, (2013): 179-189.
6. M. Alagesan; N. S. P. **Bhuvanesh**; and N. Dharmaraj. "Potentially cytotoxic new copper(ii) hydrazone complexes: synthesis, crystal structure and biological properties." *Dalton Trans.* 42, no. 19 (2013): 7210-7223.
7. A. A. Yakovenko; J. H. Reibenspies; N. **Bhuvanesh**; and H.-C. Zhou. "Generation and applications of structure envelopes for porous metal-organic frameworks." *J. Appl. Crystallogr.* 46, no. 2 (2013): 346-353.
8. G. S. Suresh Kumar; P. G. Seethalakshmi; D. Sumathi; N. **Bhuvanesh**; and S. Kumaresan. "Syntheses, structural characterization, and DPPH radical scavenging activity of cocrystals of caffeine with 1- and 2-naphthoxyacetic acids." *J. Mol. Struct.* 1035, (2013): 476-482.
9. G. S. Suresh Kumar; P. G. Seethalakshmi; N. **Bhuvanesh**; and S. Kumaresan. "Cocrystals of caffeine with formylphenoxyaliphatic acids: Syntheses, structural characterization, and biological activity." *J. Mol. Struct.* 1034, (2013): 302-309.
10. M. Nagaraj; M. Boominathan; R. Manikannan; S. Muthusubramanian; and N. **Bhuvanesh**. "Synthesis of highly substituted N-hydroxy piperidine via intramolecular reductive cyclization of 1-keto-5-ketoxime." *Synth. Commun.* 43, no. 7 (2013): 930-940.

11. J. C. DeMott; N. **Bhuvanesh**; and O. V. Ozerov. "Frustrated Lewis pair-like splitting of aromatic C-H bonds and abstraction of halogen atoms by a cationic [(FNP)Pt]⁺ species." *Chem. Sci.* 4, no. 2 (2013): 642-649.
12. G. S. Suresh Kumar; S. Kumaresan; A. Antony Muthu Prabhu; N. **Bhuvanesh**; and P. G. Seethalakshmi. "An efficient one pot syntheses of aryl-3,3'-bis(indolyl)methanes and studies on their spectral characteristics, DPPH radical scavenging-, antimicrobial-, cytotoxicity-, and antituberculosis activity." *Spectrochim. Acta, Part A* 101, (2013): 254-263.
13. S. K. Ghosh; A. S. Ojeda; J. Guerrero-Leal; N. **Bhuvanesh**; and J. A. Gladysz. "New Media for Classical Coordination Chemistry: Phase Transfer of Werner and Related Polycations into Highly Nonpolar Fluorous Solvents." *Inorg. Chem.* 52, no. 16 (2013): 9369-9378.
14. J. Reibenspies; and N. **Bhuvanesh**. "Absolute structure of R-(-)-2-methylpiperazine and S-(+)-2-methylpiperazine." *Acta Crystallogr., Sect. B Struct. Sci., Cryst. Eng. Mater.* 69, no. 3 (2013): 288-293.

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15. P. Krishnamoorthy; P. Sathyadevi; R. R. Butorac; A. H. Cowley; N. S. P. **Bhuvanesh**; and N. Dharmaraj. "Copper(I) and nickel(II) complexes with 1 : 1 vs. 1 : 2 coordination of ferrocenyl hydrazone ligands: Do the geometry and composition of complexes affect DNA binding/cleavage, protein binding, antioxidant and cytotoxic activities?" *Dalton Trans.* 41, no. 15 (2012): 4423-4436.
16. D. S. Raja; N. S. P. **Bhuvanesh**; and K. Natarajan. "A novel water soluble ligand bridged cobalt(II) coordination polymer of 2-oxo-1,2-dihydroquinoline-3-carbaldehyde (isonicotinic) hydrazone: evaluation of the DNA binding, protein interaction, radical scavenging and anticancer activity." *Dalton Trans.* 41, no. 15 (2012): 4365-4377.
17. D. S. Raja; N. S. P. **Bhuvanesh**; and K. Natarajan. "DNA binding, protein interaction, radical scavenging and cytotoxic activity of 2-oxo-1,2-dihydroquinoline-3-carbaldehyde(2'-hydroxybenzoyl)hydrazone and its Cu(II) complexes: A structure activity relationship study." *Inorg. Chim. Acta* 385, (2012): 81-93.
18. C. R. Hilliard; N. **Bhuvanesh**; J. A. Gladysz; and J. Bluemel. "Synthesis, purification, and characterization of phosphine oxides and their hydrogen peroxide adducts." *Dalton Trans.* 41, no. 6 (2012): 1742-1754.
19. D. Senthil Raja; N. S. P. **Bhuvanesh**; and K. Natarajan. "Synthesis, crystal structure and pharmacological evaluation of two new Cu(II) complexes of 2-oxo-1,2-dihydroquinoline-3-carbaldehyde (benzoyl) hydrazone: A comparative investigation." *Eur. J. Med. Chem.* 47, (2012): 73-85.
20. J. A. Denny; W. S. Foley; E. Almaraz; J. H. Reibenspies; N. **Bhuvanesh**; and M. Y. Darensbourg. "Comparisons of zinc with cadmium in N2S2 coordination and as S-bonded adducts to tungsten carbonyls." *Dalton Trans.* 41, no. 1 (2012): 143-148.

21. D. S. Raja; N. S. P. **Bhuvanesh**; and K. Natarajan. "Structure-activity relationship study of copper(II) complexes with 2-oxo-1,2-dihydroquinoline-3-carbaldehyde (4'-methylbenzoyl) hydrazone: synthesis, structures, DNA and protein interaction studies, antioxidative and cytotoxic activity." *JBIC, J. Biol. Inorg. Chem.* 17, no. 2 (2012): 223-237.
22. P. Krishnamoorthy; P. Sathyadevi; R. Butorac Rachel; H. Cowley Alan; S. P. **Bhuvanesh** Nattamai; and N. Dharmaraj. "Variation in the biomolecular interactions of nickel(ii) hydrazone complexes upon tuning the hydrazide fragment." *Dalton Trans*, (2012).
23. M. Nagaraj; M. Iniya; M. Boominathan; S. Muthusubramanian; and N. **Bhuvanesh**. "Synthesis of cyclic nitrone and 1,2-oxazine from 1,2,4-triaryl-but-2-ene-1,4-dione and hydroxylamine." *J. Chem. Sci. (Bangalore, India)* 124, no. 4 (2012): 913-919.
24. P. Sathyadevi; P. Krishnamoorthy; N. S. P. **Bhuvanesh**; P. Kalaiselvi; V. Vijaya Padma; and N. Dharmaraj. "Organometallic ruthenium(II) complexes: Synthesis, structure and influence of substitution at azomethine carbon towards DNA/BSA binding, radical scavenging and cytotoxicity." *Eur. J. Med. Chem.* 55, (2012): 420-431.
25. T. K. Lai; G. Biswas; S. Chatterjee; A. Dutta; C. Pal; J. Banerji; N. **Bhuvanesh**; J. H. Reibenspies; and K. Acharya. "Leishmanicidal and Anticandidal Activity of Constituents of Indian Edible Mushroom *Astraeus hygrometricus*." *Chem. Biodiversity* 9, no. 8 (2012): 1517-1524.
26. M. C. Clough; P. D. Zeits; N. **Bhuvanesh**; and J. A. Gladysz. "Toward permetalated alkyne/azide 3 + 2 or "click" cycloadducts." *Organometallics* 31, no. 15 (2012): 5231-5234.
27. M. Nagaraj; M. Boominathan; S. Muthusubramanian; and N. **Bhuvanesh**. "Microwave-assisted metal-free synthesis of 2,8-diaryl-6-aminoimidazo[1,2-a]pyridine via amine-triggered benzannulation." *Synlett* 23, no. 9 (2012): 1353-1357.
28. N. Paul; S. Kaladevi; A. J. Beneto; S. Muthusubramanian; and N. **Bhuvanesh**. "Synthesis of oxathiane and morpholine from acyclic precursors: a modified Mitsunobu reaction." *Tetrahedron* 68, no. 34 (2012): 6892-6901.
29. M. Nagaraj; M. Boominathan; D. Perumal; S. Muthusubramanian; and N. **Bhuvanesh**. "Copper(I)-Catalyzed Cascade Sulfonimidate to Sulfonamide Rearrangement: Synthesis of Imidazo[1,2-a][1,4]diazepin-7(6H)-one." *J. Org. Chem.* 77, no. 14 (2012): 6319-6326.
30. P. Krishnamoorthy; P. Sathyadevi; R. R. Butorac; A. H. Cowley; N. S. P. **Bhuvanesh**; and N. Dharmaraj. "Variation in the biomolecular interactions of nickel(II) hydrazone complexes upon tuning the hydrazide fragment." *Dalton Trans.* 41, no. 22 (2012): 6842-6854.
31. E. Ramachandran; D. Senthil Raja; S. P. **Bhuvanesh** Nattamai; and K. Natarajan. "Mixed ligand palladium(ii) complexes of 6-methoxy-2-oxo-1,2-dihydroquinoline-3-carbaldehyde 4N-substituted thiosemicarbazones with triphenylphosphine co-ligand: Synthesis, crystal structure and biological properties." *Dalton Trans*, (2012).

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32. M. Stollenz; N. **Bhuvanesh**; J. H. Reibenspies; and J. A. Gladysz. "Syntheses and structures of digold complexes of macrobicyclic dibridgehead diphosphines that can turn themselves inside out." *Organometallics* 30, no. 24 (2011): 6510-6513.
33. D. S. Raja; N. S. P. **Bhuvanesh**; and K. Natarajan. "Effect of N(4)-Phenyl Substitution in 2-Oxo-1,2-dihydroquinoline-3-carbaldehyde Semicarbazones on the Structure, DNA/Protein Interaction, and Antioxidative and Cytotoxic Activity of Cu(II) Complexes." *Inorg. Chem. (Washington, DC, U. S.)* 50, no. 24 (2011): 12852-12866.
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35. P. Sathyadevi; P. Krishnamoorthy; R. R. Butorac; A. H. Cowley; N. S. P. **Bhuvanesh**; and N. Dharmaraj. "Effect of substitution and planarity of the ligand on DNA/BSA interaction, free radical scavenging and cytotoxicity of diamagnetic Ni(II) complexes: A systematic investigation." *Dalton Trans.* 40, no. 38 (2011): 9690-9702.
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37. M. Stollenz; M. Barbasiewicz; A. J. Nawara-Hultzsich; T. Fiedler; R. M. Laddusaw; N. **Bhuvanesh**; and J. A. Gladysz. "Dibridgehead Diphosphines that Turn Themselves Inside Out." *Angew. Chem., Int. Ed.* 50, no. 29 (2011): 6647-6651, S6647/1-S6647/17.
38. M. Nagaraj; M. Boominathan; S. Muthusubramanian; and N. **Bhuvanesh**. "Synthesis of novel N-hydroxy heterocycles via intramolecular reductive cyclization of diketoximes by NaBH₃CN." *Org. Biomol. Chem.* 9, no. 12 (2011): 4642-4652.
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41. D. Sukanya; D. S. Raja; N. S. P. **Bhuvanesh**; and K. Natarajan. "Ru(III) complexes containing 3,5-pyrazole dicarboxylic acid and triphenylphosphine/triphenylarsine: Synthesis, characterization and catalytic activity." *Polyhedron* 30, no. 6 (2011): 1108-1113.

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43. M. Stollenz; M. Barbasiewicz; J. Nawara-Hultzschn Agnieszka; T. Fiedler; M. Laddusaw Ryan; N. **Bhuvanesh**; and A. Gladysz John. "Dibridgehead diphosphines that turn themselves inside out." *Angew Chem Int Ed Engl* 50, no. 29 (2011): 6647-51.

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44. J. H. Reibenspies; and N. **Bhuvanesh**. *Two-Dimensional X-Ray Diffraction, by Bob B. He*. Vol. 25, 2010.
45. G. R. Owen; S. Gauthier; N. Weisbach; F. Hampel; N. **Bhuvanesh**; and J. A. Gladysz. "Towards multistranded molecular wires: Syntheses, structures, and reactivities of tetraplatinum bis(polyynediyl) complexes with Pt-Cx-Pt-(P(CH₂)₃P)₂-Pt-Cx-Pt-(P(CH₂)₃P)₂ cores (x = 4, 6, 8)." *Dalton Trans.* 39, no. 22 (2010): 5260-5271.

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48. E. Almaraz; J. A. Denny; W. S. Foley; J. H. Reibenspies; N. **Bhuvanesh**; and M. Y. Darensbourg. "Zinc/Nickel exchange and ligand cannibalism in N₂S₂O_{1,2} donor ligand sets." *Dalton Trans.*, no. 43 (2009): 9496-9502.
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53. M. L. Singleton; N. **Bhuvanesh**; J. H. Reibenspies; and M. Y. Darensbourg. "Synthetic support of de novo design: sterically bulky [FeFe]-hydrogenase models." *Angew. Chem., Int. Ed.* 47, no. 49 (2008): 9492-9495.
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Conferences and Technical Schools

- **Instructor:** TOPAS Spotlight Series, 2007-present
- **Virtual Instructor:** Practical Powder Diffraction Course marketed exclusively by Bruker AXS, Inc.
- **Instructor:** Powder XRD Data Collection and Analysis, Online Course, Madison, WI, 2008
- **Instructor:** Training Clients on Powder X-ray Diffraction Training; Consultant for Bruker AXS, Madison, WI (2007 - present)
- **Instructor:** DIFFRACplus TOPAS Applications Training, Madison, WI, 2008
- **Co-organizer and Invited Speaker:** of the 2005 ACA workshop on Structure Solution and Refinement of difficult structures using powder diffraction
- **Invited Faculty:** American Crystallographic Association Summer Course, Indiana University at Pennsylvania, Indiana, PA, 2004
- Invited Lecture, American Crystallographic Association, Orlando, FL, 2005
- Invited Lecture, 13th Bruker-Nonius Area Detector Users Group Meeting, Madison, WI, 2005
- Invited Lecture, American Crystallographic Association, Chicago, IL, 2004
- Invited Lecture, American Crystallographic Association, Covington, KY, 2003
- Invited Lecture, 12th Bruker Area Detector Users Group Meeting, Madison, WI, 2003
- Poster presentation, Gordon Research Conference, New London, NH, 2002
- Poster presentation, American Conference on Neutron Scattering, Knoxville, TN, 2002
- Pittsburgh Diffraction Society Conference, Covington, Kentucky, 2001
- Poster presentation, Inorganic Materials Conference, Versailles, France, 1998
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