

J. NARASIMHA MOORTHY, Ph.D

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Place of Birth: B. Kotha Kota (Andhra Pradesh)

Educational Qualifications

Ph.D.	Dept. of Organic Chemistry Indian Institute of Science Bangalore	Aug-1988 to Jan-1994	Organic Chemistry
M.Sc.	Bangalore University Bangalore	July-1986 to June-1988 (First Class)	Organic Chemistry
B.Sc.	Bangalore University Bangalore	Aug-1981 to Mar-1985 (First Class)	Chemistry, Physics and Mathematics

Details of Professional Training and Research Experience

Postdoctoral Fellow	Feb-1994 to Jan-1995	Prof. Jay K. Kochi Dept. of Chemistry Univ. of Houston Houston, Texas, USA.
Postdoctoral Fellow (AvH Fellow)	Mar-1995 to Oct-1996	Prof. Waldemar Adam Institute of Organic Chemistry Univ. of Wuerzburg Wuerzburg, Germany
Postdoctoral Fellow	Nov-1996 to May-1998	Prof. Cornelia Bohne Dept. of Chemistry Univ. of Victoria, Victoria, Canada

Details of Employment

Assistant Professor	Jun-1998 to Nov-1998	Department of Chemistry Indian Institute of Technology Kharagpur
Assistant Professor	Dec-1998 to Nov-2003	Department of Chemistry Indian Institute of Technology Kanpur
Associate Professor	Dec-2003 to Dec-2007	-do-
Professor	Jan-2008 to Present	-do-

Awards/Fellowships Received

- Joint UGC-CSIR Junior and Senior Research Fellowships (1989 to 1993)
- AvH Postdoctoral Fellowship, Germany (Mar-1995 to Oct-1996)
- Young Chemist Award, Chemical Research Society of India (CRSI), India (2003)
- Visiting Professor (AvH), International University Bremen, Germany (Dec 2004 to Feb 2005)
- Ramanna Research Fellowship, Department of Science and Technology, India (2007-2010)
- Visiting Professor (RSC Journals Grants), Jacobs University Bremen, Germany (2007)
- ICTS (International Centre of Trans-Disciplinary Studies) Fellow, Jacobs University, Germany (June-July, 2008)
- Shanti Swarup Bhatnagar Prize in Chemical Sciences, CSIR (Council of Scientific and Industrial Research), India (2008)
- Recipient of Bronze Medal, Chemical Research Society of India (CRSI), India (2009)
- Elected Fellow of Indian Academy of Science (FASc.), Bangalore (2010)
- Visiting Professor, University of Strasburg, Strasburg, France (2010)
- Visiting Professor, Osaka University, Japan (2010)
- Member of the Editorial Board, New Journal of Chemistry, published jointly by RSC and CNRS (Jan-2011 to Dec-2013)
- Lalit M. Kapoor Chair Professor, IIT Kanpur (2011-2014)
- Member of the Editorial Board, International Journal of Photoenergy, published by Hindhavi Publishers (2012-2015)
- Visiting Professor, AvH Re-invitation fellowship, Germany, 2013
- Fellow of Royal Society of Chemistry (FRSC), 2014.
- Member of the Editorial Board, J. Chem. Soc. (Ind. Acad. Sci., Springer), 2014-2017.
- J. C. Bose Fellowship, DST, 2015-2020.
- Dr. Jag Mohan Garg Chair Professor, IIT Kanpur (2015-2018)

- Invited for Platinum Jubilee Lecture, 103 Indian Science Congress 2016, Mysuru
 - Selected for Millennium Plaque of Honor, 103 Indian Science Congress 2016, Mysuru
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Others

- Member of Indian Delegation of Organic Chemists to Taiwan on an Indo-Taiwan Scientific Exchange Program sponsored by DST (Dept. of Science and Technology), India, January, 2007.
 - Member of Indian Delegation of Solid State Chemists to Russia on Indo-Russian Scientific Exchange Program sponsored by DST (Dept. of Science and Technology), India, Sept, 2009.
 - Member of Indian Contingent of Organic Chemists to France as part of IFCOS (Indo-French Conference on Organic Synthesis), Villard de Lans, France, Sept, 2010.
 - Invited by Taiwan Academy of Sciences to give lectures for a week (Oct 2010).
 - Convener, Organic Chemistry, Indo-US Frontiers Symposium, 2011.
 - Member, Faculty selection Committee, NIT, Hamirpur, 2011.
 - Member of PAC for DST Fast-Track Young Scientist Scheme, 2011-2015.
 - K. S. Krishnan Memorial Lecture, IACS, Kolkata, 2013.
 - R. A. Mashelkar Endowment Lecture, NCL, Pune, 2014.
 - Member, CSIR young scientist and SSB selection committees.
 - Member of PAC (SERB) for Organic Chemistry, SERB, 2015-2018.
 - Member, School Board of the School of Chemistry, University of Hyderabad, 2016-2019.
 - Member, Faculty HAG promotions, IITG, 2015.
 - Member, Faculty selection committee, BITS, Mesra, 2016.
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Research Areas of Interest

- Supramolecular Chemistry
 - Organic Photochemistry
 - Organic Functional Materials
 - Mechanistic Organic Chemistry
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Focus of Research

The focus of my research is centered on the design, synthesis and functional demonstration of organic materials as applied to three different domains: i) photochemistry, ii) supramolecular chemistry and iii) organic synthesis/mechanistic organic chemistry.

Insofar as the photochemistry is concerned, we have comprehensively established the solid-state photochemistry of *o*-alkylaromatic aldehydes and Norrish Type II photochemistry of α,β -disubstituted butyrophenones and the associated diastereomer-differentiating photochemistry. It is shown through nanosecond time-resolved transient absorption spectroscopy that the diastereomer-differentiating photochemistry that is observed in the product formation emanates at the triplet state and that the diastereomeric 1,4-biradicals of the precursors of the products likewise collapse with different rates. At the same time, we are exploring fundamental concepts underlying the phenomenon of photochromism in a class of compounds called chromenes. We have shown that simple arylation of diarylchromenes can lead to dramatic modification in the photochromic properties through changes in the absorption properties of *o*-quinonoid intermediates. Similarly, a variety of factors such as toroidal conjugation, through space interactions, phane effects and helicity are shown to influence the phenomenon of photochromism based on diarylchromenes.

In the realm of supramolecular chemistry, we have shown that sterically-hindered carboxylic acids exhibit unique synthons. With a rational design of molecular modules based on 4-fold functionalized bimesityls and pyrenes, a rich inclusion chemistry and control of molecular self-assembly based on hydrogen and coordinate covalent bonds has been developed. By exploiting the concepts of supramolecular chemistry, a novel class of amorphous materials are being developed; the functional utility of some systems has been demonstrated through OLED device fabrications with high quantum efficiencies.

We have been endeavoring to apply the riches of supramolecular chemistry to develop novel oxidation chemistry based on IBX—a reagent that has surged into lot of prominence in the contemporary oxidation chemistry. In recent years, the focus has also been on the exploitation of hydrogen bonding in stereoselective organocatalysis. Some results in this area have already been published in journals of high repute.

Publications – J. Narasimha Moorthy

ACS		Wiley		RSC		Elsevier	
<i>J. Am. Chem. Soc.</i>	12	<i>Angew. Chem.</i>	02	<i>Chem. Comm</i>	02	<i>Tet. Lett</i>	10
<i>J. Org. Chem.</i>	25	<i>Chem. Eur. J.</i>	06	<i>Chem. Sci.</i>	01	<i>Tetrahedron</i>	04
<i>Cryst. Growth Des.</i>	12	<i>Eur. J. Org. Chem.</i>	06	<i>J. Mater. Chem. A</i>	01	<i>J. Mol. Struct.</i>	04
<i>Org. Lett.</i>	05	<i>ChemSelect</i>	01	<i>Org. Biomol. Chem.</i>	03	<i>Org. Elect.</i>	01
<i>ACS Appl. Mater.</i>	02			<i>CrystEngComm</i>	02		
				<i>RSC Adv.</i>	02		

135. Phenomenon to Functions: Photochromism of Diarylpyrans, Spectrokinetic Properties and Functional Materials
Mukhopadhyay, A.; Moorthy, J. N.
NPG Asia Mater. **2016**, Submitted.
134. Tri- and Tetraarylanthracenes with novel λ , χ and ψ Topologies as Blue-Emissive as well as Fluorescent Host Materials in Organic Light Emitting Diodes (OLEDs)
Jhulki, A.; Bajpai, A.; Nagarajaiah, H.; Chow, T. J. Moorthy, J. N.
J. Org. Chem. **2016**, Submitted.
133. Biginelli Reaction: An Overview
Nagarajaiah, H.; Mukhopadhyay, A.; Moorthy, J. N.
Tetrahedron Lett. Digest. **2016**, Submitted.
132. Concomitant Structural Isomerism in MOFs Based on a Semi-Rigid Tritopic Triacid Linker: Kinetic and Thermodynamic Considerations in Solvent-Mediated Framework Metamorphosis
Chandrasekhar, P.; Bajpai, A.; Savitha, G.; **Moorthy, J. N.**
Cryst. Growth Des. **2016**, Submitted.
131. Hydrogen-Bonded 2D Metal-Organic Frameworks Based on Triptycene Core: Exfoliation-Induced Luminescence Properties and Selective CO₂ Capture
Chandrasekhar, P.; Mukhopadhyay, A.; Savitha, G.; **Moorthy, J. N.**
J. Mater. Chem. A **2016**, In revision.
130. Mechanochemical *catalytic* oxidation of alcohols in the *solid state* by in situ-generated *modified* IBX from 3,5-di-*tert*-butyl-2-iodobenzoic acid (DTB-IA)/Oxone
Mishra, A. K.; Moorthy, J. N.
Org. Chem. Front. **2016**, Submitted.
129. IBX-Initiated One-Pot Synthesis of 4-Arylthionaphtho-1,2-quinones, 4-Arylthio-1,2-diacetoxynaphthalenes and 5-Arylthio-/5-aminobenzo[*a*]phenazines
Mishra, A. K.; Moorthy, J. N.
J. Org. Chem. **2016**, ASAP.
128. Deep Blue-Emissive Bifunctional (Hole-Transporting + Emissive) Materials with CIEy ~ 0.06 Based on ‘U’-Shaped Phenanthrene Scaffold for Application in Organic Light-Emitting Diodes
Jhulki, S.; Mishra, A. K.; Chow, T. J.; Moorthy, J. N.
J. Mater. Chem. C **2016**, Submitted.
127. New Insights into an Old Problem. Tertiary Aliphatic Amine Quenchers of Fluorescence from Sterically-Shielded Pyrenyl Molecules
Bertocchi, M. J.; Bajpai, A.; Moorthy, J. N.; Weiss, R. G.
J. Phys. Chem. **2016**, Submitted.
126. Fluoride Triggers Ring-Opening of Diarylpyrans to Highly Colored Merocyanine Dyes to Enable Colorimetric Naked-Eye Sensing in Sub-ppm Levels
Mukhopadhyay, A.; Maka, V. A.; Moorthy, J. N.
J. Org. Chem. **2016**, Accepted.

- 125.** Mechanochemical Solid-State Synthesis of 2-Aminothiazoles, Quinoxalines and Bezoylebenzofurans from Ketones by One-Pot Sequential Acid- and Base-Mediated Reactions
Nagarajaiah, H.; Mishra, A. K.; Moorthy, J. N.
Org. Biomol. Chem. **2016**, *14*, 4129.
- 124.** Benzophenone-Imbedded Benzoyltriptycene with High Triplet Energy for Application as a Universal Host Material in Phosphorescent Organic Light-Emitting Diodes (PhOLEDs)
Jhulki, S.; Chow, T. J.; Moorthy, J. N.
New J. Chem. **2016**, ASAP.
- 123.** Helicity as a Design Element in the Creation of Organic Materials for OLEDs: Synthesis and Diverse Applications of Carbo- and Aza[5]helical Diamines
Jhulki, S.; Ghosh, A.; Chow, T. J.; **Moorthy, J. N.**
Chem. Eur. J. **2016**, *22*, 9375.
- 122.** Oxidation of Thiols to Sulphonic Acids with Oxone®/NaHCO₃ Reagent System
Parida, K. N.; Chandra, A.; **Moorthy, J. N.**
ChemistrySelect. **2016**, *01*, 490.
- 121.** CO₂ Capture and Luminescence Properties of Diverse Metal-Organic Materials Based on Twisted 9,9'-Bianthryl-Dicarboxylic Acid
Seth, S.; Savitha, G Jhulki, S.; **Moorthy, J. N.**
Cryst. Growth Des. **2016**, *16*, 2024.
- 120.** Hole-Transporting Materials Based on Twisted Bimesitylenes for Stable Perovskite Solar Cells with High Efficiency
Lin, Y-D.; Ke, B-Y.; Lee, K-M.; Chang, S. H.; Wang, K-H.; Huang, SH.; Wu, C-G.; Chou, P-T.; Jhulki, S.; **Moorthy, J. N.**; Chang, Y. J.; Liau, K-L.; Chung, H-C.; Liu, C. Y.; Sun, S. S.; Chow, T. J.
ChemSusChem. **2016**, *9*, 274.
- 119.** Remarkably Selective and Enantiodifferentiating Sensing of Histidine by a Fluorescent Homochiral Zn-MOF Based on Pyrene-tetralactic Acid
Chandrasekhar, P.; Mukhopadhyay, A.; Savitha, G.; **Moorthy, J. N.**
Chem. Sci. **2016**, *07*, 3085.
- 118.** Benzophenones as Generic Host Materials for Phosphorescent Organic Light-Emitting Diodes (PhOLEDs)
Jhulki, S.; Ghosh, A.; Chow, T. J.; **Moorthy, J. N.**
ACS Appl Materials & Interfaces. **2016**, *8*, 1527.
- 117.** Remarkable influence of phenyl/arylethynylation on the photochromism of diarylbenzopyrans (chromenes)
Mukhopadhyay, A.; Vijay Kumar Maka, V. A.; and Moorthy, J. N.
Eur. J. Org. Chem. **2016**, 274.
- 116.** Twisted Biaryl-Amines as Novel Host Materials for Green-Emissive Phosphorescent Organic Light-Emitting Diodes (PhOLEDs)
Jhulki, S.; Ghosh, A.; Chow, T. J.; Moorthy, J. N.
RSC Adv. **2015**, *5*, 101169.
- 115.** Carbon Dioxide Capture by a Metal-Organic Framework with Nitrogen-Rich Channels Based on Rationally Designed Triazole-Functionalized Tetraacid Organic Linker
Seth, S.; Savitha, G.; **Moorthy, J. N.**
Inorg. Chem. **2015**, *54*, 6829.
- 114.** Isomorphous Three-component Crystals (Pseudopolymorphs of Binary Cocrystals) Based on Lattice Inclusion of Guests with a Sterically-Rigidified Tetraarylpyprene Host
Moorthy, J. N.; Natarajan, P.; Krishna, M. S.; Nagarajaiah, H.; Venugopalan, P.
CrystEngComm. **2015**, *17*, 5307.
- 113.** A Fluorescent Paramagnetic Mn-MOF Based on Semi-Rigid Pyrene-Tetracarboxylic Acid: Sensing of Solvent Polarity and Explosive Nitroaromatics

Bajpai, A.; Krishna, S. M.; Mukhopadhyay, A.; Savitha, G.; **Moorthy, J. N.**
IUCrJ. **2015**, 2, 552.

- 112.** Diverse Isostructural Metal-Organic Frameworks by Promiscuous Single Crystal-to-Single Crystal Postsynthetic Metal Node Metathesis: Anionic-to-Cationic Framework Conversion, Luminescent MOFs and Organic Dye Separation by Cation/Anion Exchange
Seth, S.; Savitha, G.; **Moorthy, J. N.**
J. Mater. Chem. A. **2015**, 03, 22915.
- 111.** Synthesis of o-Carboxyarylacrylic Acids by Room Temperature Oxidative Cleavage of Hydroxynaphthalenes and Higher Aromatics with Oxone
Parida, K. N.; **Moorthy, J. N.**
J. Org. Chem. **2015**, 80, 8354.
- 110.** Organic amorphous hole-transporting materials based on Troger's Base: alternatives to NPB
Neogi, I.; Jhulki, S.; Rawat, M.; R. S. Anand, R. S.; Chow, T. J. Moorthy, J. N.
RSC Adv. **2015**, 5, 26806.
- 109.** Tetraaryl biphenyl as a New Lattice Inclusion Host by Structure Reductionism: Shape and Size Complementarity Based on Torsional Flexibility
Neogi, I.; Bajpai, A.; Savitha, G.; Moorthy, J. N.
Cryst. Growth Des. **2015**, 15, 2129.
- 108.** Single Crystal-to-Single Crystal Site-Selective Postsynthetic Metal Exchange in a Zn-MOF Based on Semi-Rigid Tricarboxylic Acid and Access to Bimetallic MOFs
Bajpai, A.; Chandrasekhar, P.; Govardhan, S.; Banerjee, R.; **Moorthy, J. N.**
Chem. Eur. J. **2015**, 21, 2759.
- 107.** Photochromism of Acetyl-Cyclophanochromene: Intriguing Stabilization of Photogenerated Colored o-Quinonoid Intermediates
Mandal, S.; Mukhopadhyay, A., Moorthy, J. N.
Eur. J. Org. Chem. **2015**, 1403.
- 106.** Amorphous Host Materials Based on Troger's Base Scaffold for Application in Phosphorescent Organic Light-Emitting Diodes
Neogi, I.; Jhulki, S.; Ghosh, A.; Chow, T. J. **Moorthy, J. N.**
ACS Appl Materials & Interfaces, **2015**, 7, 3298.
- 105.** Trihaloisocyanuric Acids as Highly Atom-Economic and Innocuous Reagents for Solvent-Free Halogenation of Aromatics and Carbonyl Compounds
Mishra, A. K.; Nagarajaiah, H.; **Moorthy, J. N.**
Eur. J. Org. Chem. **2015**, 2733.
- 104.** Porous Coordination Polymers of Diverse Topologies Based on D_{2d} -Symmetric *Twisted* Tetrapyridylbiaryl: Application in Nucleophile Catalysis of Acylation of Phenols
Seth, S.; Venugopalan, P.; Moorthy, J. N
Chem. Eur. J. **2015**, 21, 2241.
- 103.** Oxidative Cleavage of Olefins by In Situ-Generated Catalytic 3,4,5,6-Tetramethyl-2-iodoxybenzoic Acid/Oxone
Moorthy, J. N., Parida, K. N.
J. Org. Chem. **2014**, 79, 11431.
- 102.** Bifunctional Organic Materials for OLEDs Based on Tröger's Base: Subtle Structural Changes and Significant Differences in Electroluminescence
Neogi, I.; Jhulki, S.; Ghosh, A.; Chow, T. J. **Moorthy, J. N.**
Org. Electron. **2014**, 15, 3766.
- 101.** Excited-state properties of fluorenones: influence of substituents, solvent and macrocyclic encapsulation
Ghosh, I.; Mukhopadhyay, A.; Koner, A. L.; Samanta, S.; Nau, W. M.; Moorthy, J. N.
Phys. Chem. Chem. Phys. **2014**, 16, 16436.
- 100.** Guest-Responsive Structural Adaptation of a Rationally-Designed Molecular Tweezer Based

on Tröger's Base

Neogi, I.; Bajpai, A.; Moorthy, J. N.

J. Chem. Sci. **2014**, (Invited Article), *126*, 1323.

- 99.** Self-Assembly of Sterically-Rigidified 3-Connecting Benzenetribenzoic Acid into (6,3) and (3,3) Nets and Stabilization of Water Helical Conduit in the Crystal Lattice
Bajpai, A.; Venugopalan, P.; Moorthy, J. N.
CrystEngComm. (Invited Article) **2014**, *16*, 4853.
- 98.** Engineering of Lattice Inclusion Based on Dimer Synthon-Mediated Hierarchical Self-Assembly of Carboxylic Acids
Bajpai, A.; Krishna, M. S.; Moorthy, J. N.
J. Ind. Insti. Sci. (Invited Article) **2014**, *94*, 25.
- 97.** Oxidation Cascade with Oxone: Cleavage of Olefins to Carboxylic Acids
Parida, K. N.; Moorthy, J. N.
Tetrahedron, **2014**, *70*, 2203.
- 96.** Facile Organocatalytic Domino Oxidation of Diols to Lactones by In Situ-Generated TetMe-IBX
Jhulki, S.; Seth, S.; Mondal, M.; Moorthy, J. N.
Tetrahedron, **2014**, *70*, 3079.
- 95.** Self-Assembly of Conformationally Rigid Dialcohols (Bis-Benzocyclobutenols): Supramolecular Cyclophanes and Arrays
Bajpai, A.; Venkatakrishnan, P.; Mandal, S.; Samanta, S.; Venugopalan, P.; Moorthy, J. N.
Cryst. Growth & Des. **2013**, *13*, 4714.
- 94.** Self-Assembly of Rigid 3-Connecting Mesitylenetribenzoic Acid: Multifarious Supramolecular Synthons and Solvent-Induced Supramolecular Isomerism
Bajpai, A.; Venugopalan, P.; **Moorthy, J. N.**
Cryst. Growth & Des. **2013**, *13*, 4721.
- 93.** Helicity as a *Steric* Force: Stabilization and Helicity-Dependent Reversion of Colored *o*-Quinonoid Intermediates of Helical Chromenes
Moorthy, J. N.; Mandal, S.; Mukhopadhyay, A.; Samanta, S.
J. Am. Chem. Soc. **2013**, *135*, 6872.
- 92.** Catalytic and Chemoselective Oxidation of Activated Alcohols and Direct Conversion of Diols to Lactones with In Situ-Generated Bis-IBX Catalyst.
Seth, S.; Jhulki, S.; **Moorthy, J. N.**
Eur. J. Org. Chem. **2013**, 2445.

- 91.** Photochromism of novel chromenes constrained to be part of [2.2]paracyclophane: remarkable 'phane' effects on the colored *o*-quinonoid intermediates
Moorthy, J. N.; Mandal, S.; Kumar, A.
New J. Chem. **2013**, *37*, 82.

Selected as a HOT article and also featured as 'Inside Cover Page'

- 90.** Oxidation of benzyl alcohols, benzyl halides, and alkylbenzenes with oxone
Parida, K. N.; Jhulki, S.; Mandal, S.; **Moorthy, J. N.**
Tetrahedron **2012**, *68*, 9768.
- 89.** Pseudopolymorphism of a Highly Adaptable Tetraarylpyrene Host that Exhibits Abundant Solid-State Guest Inclusion
(Published as part of virtual special issue In Honor of Prof. G. R. Desiraju, Invited Article)
Natarajan, P.; Bajpai, A.; Venugopalan, P.; **Moorthy, J. N.**
Cryst. Growth & Des. **2012**, *12*, 6134.
- 88.** Twisted Bimesitylene-Based Oxadiazoles as Novel Host Emitting Materials for Phosphorescent OLEDs
Venkatakrishnan, P.; Natarajan, P.; Lin, Z.; Chow, T. J.; **Moorthy, J. N.**
Tetrahedron **2012**, *68*, 7502.

87. Through-Space Control of the Persistence of Photogenerated o-Quinonoid Intermediates in Naphthalenes Containing Cofacially Oriented Chromenes and Arenes
Moorthy, J. N.; Mandal, S.; Parida, K. N.
Org. Lett. **2012**, *14*, 2438.
86. Crystal Engineering: Lattice Inclusion Based on O–H···O Hydrogen-Bonded Self-Assembly and Guest-Induced Structural Mimicry
Bajpai, A.; Natarajan, P.; Venugopalan, P.; **Moorthy, J. N.**
J. Org. Chem. **2012**, *77*, 7858.
85. Electrochemistry and Electrogenerated Chemiluminescence of Twisted Anthracene-functionalized Bimesitylenes
Suk, J.; Natarajan, P.; **Moorthy, J. N.**; Bard, A. J.
J. Am. Chem. Soc. **2012**, *134*, 3451.
84. Hydrogen-Bonded Helical Self-Assembly of Sterically-Hindered Benzyl Alcohols: Rare Isostructurality and Synthon Equivalence Between Alcohols and Acids
Moorthy, J. N., Mandal, S.; Venugopalan, P.
Cryst. Growth & Des. **2012**, *12*, 2942.
82. Rational molecular design for multicomponent guest inclusion in the solid state: differential binding of small and large aromatic guests
Natarajan, P.; Bajpai, A.; Venugopalan, P.; **Moorthy, J. N.**
Curr. Sci. (Invited Article, Special Issue) **2011**, *101*, 939.
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81. *Twist* Does a *Twist* to the Reactivity: Stoichiometric and Catalytic Oxidations with *Twisted* Tetramethyl-IBX
Moorthy, J. N.; Senapati, K.; Parida, K. N.; Jhulki, S.; Sooraj, K.; Nair, N. N.
J. Org. Chem. **2011**, *76*, 9593.
80. Influence of (2,3,4,5,6-Pentamethyl/phenyl)phenyl Scaffold: Stereoelectronic Control of the Persistence of *o*-Quinonoid Reactive Intermediates of Photochromic Chromenes
Mandal, S.; Parida, K.N.; Samanta, S.; **Moorthy, J. N.**
J. Org. Chem. **2011**, *76*, 7406.
79. Trigonal Rigid Triphenols: Self-Assembly and Multicomponent Lattice Inclusion
Moorthy, J. N.; Natarajan, P. Bajpai, A.; Venugopalan, P.
Cryst. Growth & Des. **2011**, *11*, 3406.
78. IBX-mediated one-pot synthesis of benzimidazoles from primary alcohols and arylmethyl bromides
Neogi, I.; **Moorthy, J. N.**
Tetrahedron Lett. **2011**, *52*, 3868.
77. Steady-State Photochemistry (Pscorr Cyclization) and Nanosecond Transient Absorption Spectroscopy of *Twisted* 2-Bromoaryl Ketones (Invited Article)
Moorthy, J. N.; Samanta, S.; Koner, A. L.; Nau, W. M.
Pure Appl. Chem. **2011**, *83*, 841.
76. Enantioselective Organocatalytic Biginelli Reaction: Dependence of the Catalyst on Sterics, Hydrogen Bonding, and Reinforced Chirality
Saha, S.; **Moorthy, J. N.**
J. Org. Chem. **2011**, *76*, 396.
75. 6-Membered Pseudocyclic IBX Acids: Syntheses, X-Ray Structural Characterizations and Oxidation Reactivities in Common Organic Solvents
Moorthy, J. N.; Senapati, K.; Parida, K. N.
J. Org. Chem. **2010**, *75*, 8416.
74. A novel tetraarylpyrene host: Conformation-dependent inclusion of guest molecules in the crystal lattice

- Natarajan, P.; Venugopalan, P; **Moorthy, J. N.**
J. Chem. Sci.(Invited Article, Special Issue) **2010**, *122*, 697.
- 73.** C₃-Symmetric Proline-Functionalized Organocatalysts: Enantioselective Michael addition reactions
Moorthy, J. N.; Saha, S.
Eur. J. Org. Chem. **2010**, 6359.
- 72.** Functionalized proline with double hydrogen bonding potential: highly enantioselective Michael addition of carbonyl compounds to β-nitrostyrenes in brine
Saha, S.; Seth, S.; Moorthy, J. N.
Tetrahedron Lett. **2010**, *51*, 5281
- 71.** Engineering of Ternary Co-Crystals Based on Differential Binding of Guest Molecules by a Tetraarylpyrene Inclusion Host
Moorthy, J. N.; Natarajan, P.; Venugopalan, P.
Chem. Comm. **2010**, *46*, 3574.
- 70.** Guest \subset Guest \subset Host Molecular Russian Dolls: Porous Honeycomb Networks via Trimeric Hydrogen-Bonded Self-Assembly of 3-Connecting 1,3,5-Tri(*p*-hydroxyphenyl)benzenes
Moorthy, J. N.; Natarajan, P.
Chem. Eur. J. **2010**, *16*, 7796.
- 69.** Non-Doped Pure-Blue OLEDs Based on Amorphous Phenylenevinylene-Functionalized *Twisted* Bimesitylenes
Moorthy, J. N.; Natarajan, P.; Venkatakrishnan, P.; Natarajan, P.; Huang, D-F.; Chow, T. J.
J. Org. Chem. **2010**, *75*, 2599.
- 68.** Highly enantioselective aldol reactions using *N*-arylprolinamides with enhanced acidity and double H-bonding potential
Saha, S.; **Moorthy, J. N.**
Tetrahedron Lett. **2010**, *51*, 912.
- 67.** Abundant Lattice Inclusion Phenomenon with Sterically Hindered and Inherently Shape-Selective Tetraarylpyrenes
Moorthy, J. N.; Natarajan, P.; Venugopalan, P.
J. Org. Chem. **2009**, *74*, 8566.
- 66.** IBX-I₂ Redox Couple for Facile Generation of IOH and I⁺: Expedient Protocol for Iodohydroxylation of Olefins and Iodination of Aromatics
Moorthy, J. N.; Senapati, K.; Singhal, N.
J. Org. Chem. **2009**, *74*, 6287.
- 65.** An expedient protocol for conversion of olefins to α-bromo/iodoketones using IBX and NBS/NIS
Moorthy, J. N.; Senapati, K.; Singhal, N.
Tetrahedron Lett. **2009**, *50*, 2493.
- 64.** Modulation of Spectrokinetic Properties of *o*-Quinonoid Reactive Intermediates by Electronic Factors: Time-Resolved Laser Flash and Steady-State Photolysis Investigations of Photochromic 6- and 7-Arylchromenes
Moorthy, J. N.; Koner, A. L.; Samanta, S.; Roy, A.; Nau, W. M.
Chem. Eur. J. **2009**, *15*, 4289.
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