

## **Name: Sheshanath V. Bhosale**

Designiation: Professor

**Area of Research Interest:** *Organic supramolecular chemistry, sensors, artificial photosynthesis and organic solar cells*

### **Dr. Sheshanath V. Bhosale**

Professor

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### **Achievements before joining Goa University**

#### **Awards**

2018	Dr. Bhosale awarded Professor Fellowship under UGC-Faculty Recharge Programme
2017	PhD student Anuradha Singh received best PhD student award of 2017
2017	Dr. Bhosale has been selected on Editorial Advisor Board Member of <i>ChemistryOpen</i>
2017	PhD student Aaron Raynor received Endeavour Fellowship to work in Oxford University for 6 months
2016	Dr. Bhosale elected as a Fellow of Royal Society of Chemistry (FRSC)
2017	PhD student Sam Jackson received higher Degree by Research Publications Grant (HDRPG)
2016	Dr. Bhosale elected as a Member of Royal Australian Chemical Institute of Chemistry (MRACI)
2016	PhD student Anushri Ranaware received best poster award in Royal Society of Chemistry 2016
2016	PhD student Anushri Ranaware received best PhD student 2016 award
2015	PhD student Hemlata Patil received higher Degree by Research Publications Grant (HDRPG)
Jan 2011-Dec 2017	Australian Future Fellow: Dr. Bhosale awarded prestigious ARC-Future Fellowship (FT110100152) on the topic "The development of yoctowells on magnetic nanoparticles as both tiny chemical reactors and biological models". (\$687K)
2015	Maxwell Eagle Endowment Award for Cancer Research \$10K "Laminin 67 receptor targeted pH-responsive multifunctional nanodevices as prostate cancer theranostic probes"
2016	MIT Faculty of Science Overseas Travel Grants \$2K

2014	RMIT Faculty of Science Overseas Travel Grants \$2K
2013	RMIT Faculty of Science Overseas Travel Grants \$2K
Oct 3, 2012	Received RMIT University travel award to attend The Australian Academy of Science Early career research meeting) at Canberra; (\$3K/-)
Aug 29, 2010	Dr. Bhosale was short listed for <i>European Young Chemist Award</i> in 2010, at Nuremburg, Germany
Aug 2010	Monash Faculty of Science Overseas Travel Grants (\$2K)
Aug 2009	Monash Faculty of Science Overseas Travel Grants (\$2K)
March 2008	Application for ARC Linkage (LE0882977) with Prof. Steven Langford - Enhanced NMR Research, Characterization and Analysis Facility with 9% contribution of grant \$600K.
Jan 2008-Nov 2011	<i>Australian Postdoctoral Fellow</i> : Dr. Bhosale has successively completed an APD ( <i>grant no. DP0878756</i> ) "Construction and Use of Yoctowells as Vessels for Catalysis, Sensing and Artificial Photosynthesis"; (\$414K AUD )
Jan 27, 2008	Dr. Bhosale won the young scientist award (under 35) in the International Conference on Drug Discovery and Nanotechnology held at Nanded India, Jan 2008
Mar 2005- Sept 2006	Received Roche Foundation Postdoctoral Fellowship to work with Professor Stefan Matile at University of Geneva, Switzerland ( <a href="http://www.research-foundation.org/rrf/">http://www.research-foundation.org/rrf/</a> <i>grants no. 324-2005</i> ) (CHF145K, Swiss franc)
Jan 2002- Dec. 2004	PhD scholarship of Graduate program of H-bonding and H-transfer

### **PhD student completion**

<b>Year</b>	<b>Name of Student</b>	<b>Degree</b>	<b>Theses Title</b>	<b>completed/ current/submitted</b>
Mar 2013- Aug 2015	Ms. Hemlata Patil	PhD	Design, synthesis and applications of novel heterocycle for organic photovoltaic solar cells	<b>PhD awarded</b> October 2015
Apr 2013- Aug 2015	Mrs. Melissa Kelson	PhD	Design, synthesis and applications of donor-acceptor systems for artificial photosynthesis and solar cells	<b>PhD awarded</b> May 2016
Apr 2013- Aug 2015	Mr. Aaron Raynor	PhD	Synthesis of novel small molecules for use in organic electronic photovoltaic devices	<b>PhD awarded</b> July 2016
Mar 2013- present	Mr. Jackson Sam Leslie	PhD	Crystal engineering of MOF's and their physico-chemical behaviour	<b>PhD awarded</b> Dec. 2017
Jan 2016- Dec 2016	Hughes William Joseph	Honours	Synthesis optically active compound for supramolecular applications	<b>Completed</b> with HD & published one paper 12/2016
Jan 2016- Dec 2016	Lachlan Hayes	Honours	Synthesis of gels of donor-acceptor systems	<b>Completed</b> with a HD 12/2016
June 2015	Rahul Hungarge	PhD	Study towards Donor-Acceptor Artificial Photosystems	<b>PhD awarded</b> July 2017: North Maharashtra University, India

Mar 2015-present	Ms. Anushri Rananaware	PhD	Synthesis of novel tetraphenylethylene, tetraphenylmethane and Spiro based derivatives and their applications in supramolecular chemistry	<b>PhD awarded</b> Aug. 2017
Apr 2015-present	Mr. Duong Duc La	PhD	Synthesis of novel material for sensing and photocatalysis	<b>PhD awarded</b> Dec. 2017
Mar 2015-present	Mrs. Anuradha	PhD	Synthesis of Aggregation Induced Emission based derivatives for their application in supramolecular chemistry	<b>PhD awarded</b> Dec. 2017
April 2016-	Mina Salimimarand	Master	Synthesis of AIE-active compound for their applications in sensing, self-assembly	<b>PhD awarded</b> Dec. 2017
February 2017	Owen Skene	Honours	Synthesis and Characterisation of a Tetraphenylethene-Based Porphyrin	<b>Awarded</b> Dec. 2017
February 2017	Miron Boguslavsky	Honours	Synthesis and characterisation of a Tetraphenylethylene derivative for use in Perovskite solar cells	<b>Awarded</b> Aug. 2017
February 2017	Aman Hundal	PhD	Synthesis of supramolecular host-guest systems with their application in sensing, catalysis and artificial photosynthesis	<b>Current</b>
February 2017	Mahmood Aljabr	PhD	Synthesis of AIE active system based on azo-connection for host-guest chemistry	<b>Current</b>
<b>Postdoc's/Undergraduate/visitors</b>				
Oct. 2016-present	Dr. Jayprakash Patwari	Visiting fellow	Multimodal Vanadium nanoparticles for targeted Cancer imaging and therapy	Research Fellow
July 2015-present	Miss. Parvathy Nakshatra	Visiting fellow	Multimodal Vanadium nanoparticles for targeted Cancer imaging and therapy	<b>Completed</b> Endeavour Research Fellowship
2015	1. Hughes William Joseph 2. Popovic Nedeljko 3. Lachlan Hayes 4. Kerk Pern Seo	Four 3 <sup>rd</sup> year students	All these students working on aspects of synthesis and characterisation of organic molecules with possible applications in sensing and catalysis	<b>Completed</b>
2015	Miss. Tanya Paige	ONPS1664	Synthesis of reversible pH sensor	<b>Completed</b>
2014	1. Christine Minh Nguyen 2. Michael Lam 3. Amel Zoghaib	Three 3 <sup>rd</sup> year	All these students working on aspects of synthesis and characterisation of organic molecules with possible applications in sensing and catalysis	<b>Completed</b>
2012	Dr. M. Adsul	Postdoc	Two postdoctoral fellows trained in Dr.	

2013	& Dr. B. Alford		Bhosale's laboratory	<i>Completed</i>
<b>Monash University (2006-2011)</b>				
2010	Mr. D. Buckland	Honours	Synthesis of core-substituted naphthalene diimide for sensing applications	<i>Completed</i>
2009	Mr. D. Krsta	Honours	Study towards trimeric porphyrin-fullerene-porphyrin stacks within Yoctoliter gaps	<i>Completed</i>
2011	Dr. M. A. HUSSAIN	Postdoc	fellows training in Dr. Bhosale's laboratory	<b>Endeavour Research Completed</b>

## Projects

- 1) *Australian Research Council-Future Fellow: received a Future Fellowship for the four years (2011-2016) with chief investigator (100% contribution) with an amount \$687,028.00 AUD. Project Title: The development of yoctowells on magnetic nanoparticles as both tiny chemical reactors and biological models.*
- 2) Maxwell Eagle Endowment Award (2015) for Cancer Research \$10K AUD “Laminin 67 receptor targeted pH-responsive multifunctional nanodevices as prostate cancer theranostic probes”.
- 3) *Australian Research Council-Australian Postdoctoral Fellow: I was successful completed a research project (Jan. 2008-Dec. 2011 with amount \$414,986 AUD) with chief investigators (100% contribution). Title: “Construction and Use of Yoctowell as Vessels for Catalysis, Sensing and Artificial Photosynthesis” grant no. DP0878756 as top three A+ ranks grant.*
- 4) Application for ARC Linkage (LE0882977) in March 2008 with Steven Langford - Enhanced NMR Research, Characterization and Analysis Facility with 9% contribution of grant \$600K).
- 5) Applications for external research grants at University of Geneva [Rouch Research Foundation grant no. 324-2005 with amount CHF 145K (<http://www.research-foundation.org/rff/>)] chief investigators (100% contribution). To work as an independent postdoctoral research scholar to work with Professor Stefan Matile.

## Publications

### (i) Scholarly book chapters

- 1 La, D. D.; Al Kobaisi, M.; Gupta, A.; Rananaware, A.; Anuradha, .; **Bhosale, S. V.**; Editors: P John Thomas, Neerish Revaprasadu, *Supramolecular Chemistry of AIE-active Tetraphenylethylene Luminophores*, Book Chapter-Nanoscience **2017**, 4, pp. 75–107, <http://pubs.rsc.org/en/content/ebook/978-1-78262-159-1>.
- 2\* **Bhosale, S. V.**; Wilman, B.; Langford, S. J. Yoctoliter-Sized Vessels as a Receptors” book chapter, “*Molecular at work*”, **2012**, Ed. Bruno Pignataro. ISBN: 978-3-527-33093-5 April 2012 410 pages

- 3 **Bhosale, S. V.**; Wilman, B.; Langford, S. J. Nanostructured Soft Material of Core-Substituted Naphthalene Diimides, *“Molecular at work” (Invited)*, **2012**, Ed. Bruno Pignataro. ISBN: 978-3-527-33093-5 April 2012 410 pages, Wiley
- 4\* Langford S. J.; Latter, M. J.; Wilman, B. E.; **Bhosale, S. V.** Biologically Derived Supramolecular Materials, *Supramolecular Chemistry: From Molecules to Nanomaterials (Ed. J. W. Steed, P. A. Gale)* Wiley VCH, **2012**, pp 3467. ISBN: 978-0-470-74640-0, February 2012 401 pages
- 5\* **Bhosale, S. V.** (2009) Naphthalenediimides as Photoactive and Electroactive Components in Supramolecular Chemistry, in *Tomorrow's Chemistry Today: Concepts in Nanoscience, Organic Materials and Environmental Chemistry, Second Edition (Ed. B. Pignataro)*, Wiley-VCH Verlag GmbH & Co. KGaA, Weinheim, Germany. doi: 10.1002/9783527628902.ch11 ISBN: 978-3-527-32623-5, October 2009
- 6 Fuhrhop, J.-H.; Wang, T.; **Bhosale, S. V.**; Bhosale, S.; Lauer, M. Aqueous Gels Made of Chiral Lipid and Porphyrin-Amphiphiles, *Molecular Gels* **2006**, 649-664. ISBN 9781402033520.
- 7 **Bhosale, S. V.**; Wang. T.; Bhosale, S.; Fuhrhop, J.-H. Photochemistry of Colloidal Particles, *Encyclopedia of Photochemistry*, Dekker, New York, DOI: 10-1081/EESCS-120023358, Dec. **2004**, pp. 1-19. ISBN: 1-4665-9045-9; eISBN: 1-4665-9061-0.

#### (ii) Refereed journal articles

- 167 Al Kobaisi, M.; Bhosale, R. S.; El-Khouly, M. E.; La, D. D.; Padghan, S. D.; Bhosale, S. V.; Jones, L. A.; Antolasic, F.; Fukuzumi, S.; **Bhosale, S. V.\*** Structure–property relationships of donor-acceptor systems: charge transfer complex and flower-like supramolecular assemblies. *Sci. Rep.* **2017**, 7: 16501.
- 165 Srivani, D.; Gupta, A.; Bhosale, S. V.; Ohkubo, K.; Bhosale, R. S.; Fukuzumi, S.; Bilic, A.; Jones, L. A.; **Bhosale, S. V.\*** A Triphenylamine-Naphthalene diimide-Fullerene Triad: Synthesis, Photoinduced Charge Separation and Solution-Processable Bulk Heterojunction Solar Cells. *Asian J. Org. Chem.* **2017**, DOI: 10.1002/ajoc.201700557.
- 164 Salimimarand, M.; La, D. D.; Bhosale, S. V.; Jones, L. A.; **Bhosale S. V.\*** Influence of Odd and Even Alkyl Chains on Supramolecular Nanoarchitecture via Self-Assembly of Tetraphenylethylene based AIEgens. *Appl. Sci.* **2017**, 7 1119.
- 163 La, D. D.; Bhosale, S. V.; Jones, L. A.; **Bhosale, S. V.\*** Tetraphenylethylene-based AIE-Active Probes for Sensing Applications. *ACS Appl. Mater. Interfaces*, **2017**, DOI: 10.1021/acsami.7b12320

- 162 Gottam, R.; Srinivasan, P.; La, D. D.; **Bhosale, S. V.\*** Improving the photocatalytic activity of polyaniline salt or porphyrin using novel polyaniline material containing both salt and charge-transfer complex *New. J. Chem.* **2017**, *41*, 14595-14601.
- 161 Ghule, N. V.; Bhosale, R. S.; Bhosale, S.V.; Srikanth, T.; Rao, N. V. S.; **Bhosale, S. V.\*** Synthesis and Liquid Crystalline Properties of Unsymmetrically Substituted Naphthalene Diimides with a Polar Head Group: Effect of Amide Hydrogen Bonding and Alkyl Chain Length. *ChemistryOpen* **2017**, DOI: 10.1002/open.201500201. **Highlighted as a back cover.**
- 160 La, D. D.; Thi, H. P. N.; Nguyen, T. A.; **Bhosale, S. V.\*** Effective Removal of Pb(II) Using Graphene@Ternary Oxides Composite as Adsorbent in Aqueous Media *New. J. Chem.* **2017**, *41*, 14627-14634.
- 159 Bhosale, R.S.; La, D. D.; Padghan, S. D.; Al Kobaisi, M.; Jones, L. A.; Bhosale, S. V.; **Bhosale, S. V.\*** Supramolecular flower-like microarchitectures self-assembly from naphthalenediimide amphiphile bearing melamine functionality *ChemistrySelect* **2017**, *2*, 10118-10122
- 158 Padghan, S. D.; Puyad, A. L.; Bhosale, R. S.; La, D.D.; Bhosale, S.V.; Bhosale, S. V.\* Pyrene based fluorescent turn-on chemosensor: aggregation-induced emission enhancement and application towards Fe<sup>3+</sup> and Fe<sup>2+</sup> recognition. *Photochem. Photobiol. Sci.*, **2017**, *16*, 1591-1595.
- 157 La, D. D.; Ramanathan, R.; Kumar, D.; Ahmed, T.; Walia, S.; Anuradha.; Berean, K. J.; **Bhosale, S. V.\***; Vipul Bansal\* Galvanic Replacement of Semiconducting CuTCNQF<sub>4</sub> with Ag<sup>+</sup> ions to fabricate new hybrids for electron transfer reactions. *ChemistrySelect* **2017**, *2* (31), 9962-9969
- 156 **Bhosale, S. V.\***; Aljabri, M.; Hundal, A.; Jackson, S. L.; La, D. D.; Salimimarand, M.; Bhosale, S. V. Development in the drug-delivery tools that transport medically active biomolecules. *Open Access J Sci* **2017**, *1*(3): 00013. DOI: 10.15406/oajs.2017.01.00013
- 155 Rananaware, A.; Gupta, A.; Kadam, **G.**; La, D. D.; Bilic, A.; Xiang, W.; Evans, R. A.; **Bhosale, S. V.\*** Cyanopyridone flanked the tetraphenylethylene to generate an efficient, three-dimensional small molecule non-fullerene electron acceptor. *Mater. Chem. Front.*, **2017**, *1*, 2511-2518. **Highlighted as a front cover.**
- 154 Srivani, D.; Agarwal, A.; Bhosale, S. V.; Puyad, A. L.; Xiang, W.; Evans, R. A.; Gupta, A.; **Bhosale, S. V.\*** Naphthalene diimide-based non-fullerene acceptors flanked by open-ended and aromatizable

- acceptor functionalities. *Chem. Commun.* **2017**, 53, 11157-11160. **IF: 6.567**; Journal Ranking **20/157** Chemistry, Multidisciplinary
- 153 Padghan, S. D.; Bhosale, R. S.; Bhosale, S. V.; Antolasic, F.; Al Kobaisi, M.; **Bhosale, S. V.\*** Pyrene-Phosphonate Conjugate: Aggregation Induced Enhanced Emission, and Selective Fe<sup>3+</sup> Ions Sensing Properties. *Molecules* **2017**, 22, 1417. **IF: 2.465**; Journal Ranking **22/58** Organic Chemistry
- 152 Aamir, M.; Khan, M. D.; Sher, M.; **Bhosale, S. V.**; Malik, M. A.; Akhtar, J.; Revaprasadu, N. A Facile Route to Cesium Lead Bromiodide Perovskite Microcrystals and Their Potential Application as Sensors for Nitrophenol Explosives. *Eur. J. Inorg. Chem.* **2017**, 3755–3760. **IF: 2.942**.
- 151 Srivani, D.; Gupta, A.; Bhosale, S. V.; Puyad, A. L.; Xiang, W.; Li, J.; Evans, R.; A. **Bhosale, S. V.\*** Non-fullerene acceptors based on central naphthalene diimide flanked by rhodanine or 1,3-indanedione. *Chem. Commun.* **2017**, 53, 7080-7083. **IF: 6.567**; Journal Ranking **20/157** Chemistry, Multidisciplinary
- 150 La, D. D.; Hangarge, R. V.; Bhosale, S. V.; Duc Ninh<sup>d</sup>, H.; Jones, L.A.; **Bhosale, S. V.\*** Arginine-mediated self-assembly of porphyrin on graphene: A photocatalyst for degradation of dyes. *Appl. Sci.* **2017**, 7, 643. **IF: 1.913**
- 149 Rao, P. S.; Gupta, A.; Bhosale, S. V.; La, D. D.; Bilic, A.; Xiang, W.; Evans, R. A. **Bhosale, S. V.\*** Donor–acceptor–acceptor sketched non-fullerene acceptors carrying terminal chromen-2-one functionality for solution-processable organic photovoltaic devices. **IF: 3.966**; Journal Ranking 1/22 Material Science & 5/72 Chemistry Applied.
- 148 La, D. D.; Anh Nguyen, T.; Jones, L. A.; **Bhosale, S. V.\*** Aresnic-La Sensor Graphene-supported spinel CuFe<sub>2</sub>O<sub>4</sub> composite: A novel adsorbent for arsenic removal in aqueous media. *Sensors* **2017**, 17, 1292. **IF: 2.677**.
- 147 La, D. D.; Anuhadra.; Kaur Hundal, A.; Jones, L. A.; **Bhosale, S. V.\*** pH-Dependent self-assembly of water-soluble sulphonate-tetraphenylethylene with aggregation-induced emission. *Supramolecular Chemistry*, **2017**, doi.org/10.1080/10610278.2017.1348604.
- 146 Gupta, A.; Rananaware,A.; Srinivasa Rao, P.; La, D.D.; Bilic, A.; Xiang, W.; Li, J.; Evans, R. A.; Bhosale, S.V.; **Bhosale, S. V.\*** An H-shaped, small molecular non-fullerene acceptor for efficient organic solar cells with an impressive open-circuit voltage of 1.17 V. *Mater. Chem. Front.*, **2017**, 1, 1600-1606.
- 145 Srivani, D.; Gupta, A.; La, D. D.; Bhosale, R. S.; Puyad, A. L.; Xiang, W.; Li, J.; **Bhosale S. V.\***; Bhosale S. V. Small molecular non-fullerene acceptors based on naphthalenediimide and

- benzoisoquinoline-dione functionalities for efficient bulk-heterojunction devices. *Dyes & Pigments*, **2017**, *143*, 1–9. . **IF: 3.966**; Journal Ranking **1/22** Material Science & **5/72** Chemistry Applied.
- 144 La, D. D.; Bhosale, S. V.; Jones, L. A.; Revaprasadu, N.; Bhosale, S. V. Fabrication of a Graphene@TiO<sub>2</sub>@Porphyrin Hybrid Material and Its Photocatalytic Properties under Simulated Sunlight Irradiation. *ChemistrySelect* **2017**, *2*, 3329-3333.
- 143 Salimimarand, M.; La, D. D.; Al Kobaisi, M.; **Bhosale, S. V.** Flower-like superstructures of AIE-active tetraphenylethylene through solvophobic controlled self-assembly *Sci. Rep. (Nature)* **2017**, *7*, 42898. **IF: 5.228**; Journal Ranking **5/57** Multidisciplinary Sciences.
- 142 Bhosale, R. S.; La, D. D.; Al Kobaisi, M.; Bhosale, S. V.; Bhosale S. V. Melamine and Spermine Mediated Supramolecular self-assembly of Octaphosphonate Tetraphenyl Porphyrin. *ChemistrySelect* **2017**, *2*, 1573-1577.
- 141 Hughes, W.; Rananaware, A.; La, D. D.; Jones, L. A.; Bhargava, S.; **Bhosale, S. V.** Aza-crown ether-core substituted naphthalene diimide fluorescence “turn-on” probe for selective detection of Ca<sup>2+</sup>. *Sensors and Actuators B Chemistry*, **2017**, *244*, 854–860. **IF: 4.758**; Journal Ranking **8/74** Analytical Chemistry
- 140 Bui, T. T.; Kim, Y. S.; Chun, H.; La, D. D.; **Bhosale, S. V.** Template synthesis of micro/mesoporous Cl-doped polypyrrole using vapor phase polymerization. *Materials Letters* **2017**, *192*, 80-83. **IF: 2.437**.
- 139 La, D. D.; Bhosale, S. V.; Jones, L. A.; **Bhosale, S. V.** Arginine-induced porphyrin-based self-assembled nanostructures for photocatalytic applications under simulated sunlight irradiation. *Photochemical & Photobiological Sciences*, **2017**, *16*, 151–154. **IF: 2.235**.
- 138 La, D. D.; Jones, L.; Antolasic, F.; **Bhosale, S. V.** Fabriation of a GNPs/Fe-Mg binary oxide composite for effective removal of arsenic from aqueous solution. *ACS Omega* **2017**, *2*, 218-226
- 137 La, D. D.; Rananaware, A.; Nguyen Thi, H. P.; Jones, L.; **Bhosale, S. V.** Fabrication of a TiO<sub>2</sub>@porphyrin nanofiber hybrid material: A highly efficient photocatalyst under simulated sunlight irradiation., *Adv. Nat. Sci.: Nanosci. Nanotechnol.* **2017**, *8*, 015009 (8pp). **IF: 1.581**.
- 136 La, D. D.; Rananaware, A.; Kim, Y. S.; **Bhosale, S. V.** Facile fabrication of Cu(II)-porphyrin MOF thin films from tetrakis(4-carboxyphenyl)porphyrin and Cu(OH)<sub>2</sub> nanoneedle array. *Applied Surface Science* **2017**, *424*, 145-150.. **IF: 3.150**.



- 135 Anuradha., La, D. D.; Al Kobaisi, M.; Gupta, A.; **Bhosale, S. V.** Chiral assembly of AIE active achiral molecules; An odd effect in self-assembly. *Chem. Eur. J.* **2017**, *23*, 3950-3956. **IF: 5.731**; Journal Ranking **22/157** Chemistry, Multidisciplinary
- 134 Hangarge, R.V.; Gupta, A.; Raynor, A. M.; La, D. D.; Bilic, A.; Li, J.; Dalal, D.; S.; Evans, R. A.; **Bhosale, S. V.** Enhancing the efficiency of solution-processable bulk-heterojunction devices *via* a three-dimensional molecular architecture comprising triphenylamine and cyanopyridone. *Dyes and Pigments* **2017**, *137*, 126–134, **IF: 3.966**; Journal Ranking **1/22** Material Science & **5/72** Chemistry Applied.
- 133 Al Kobaisi, M.; Bhosale, S. V.; Latham, K.; **Bhosale, S. V.** Functional Naphthalene Diimides: Synthesis, Properties and Applications. *Chem. Rev.*, **2016**, *116*, 11685–11796. **IF: 37.369**; Journal Ranking **1/157** Chemistry, Multidisciplinary
- 132 Rananaware, A.; Samanta, M.; Bhosale, R. S.; Al Kobaisi, M.; Roy, B.; Bheemireddy, V.; Bhosale, S. V.; Bandyopadhyay, S.; **Bhosale, S. V.** Photomodulation of fluoride ion binding through anion- $\pi$  interactions using a photoswitchable azobenzene system *Sci. Rep.* **2016**, *6*: 22928, doi:10.1038/srep22928 (**Nature Publisher**). **IF: 5.228**; Journal Ranking **5/57** Multidisciplinary Sciences
- 131 Rananaware, A.; La D. D.; Bhosale, R. S.; Al Kobaisi, M.; Bhosale, S. V.; **Bhosale, S. V.** Controlled chiral supramolecular assemblies of water soluble achiral porphyrin induced by chiral counterion. *Chem. Commun.* **2016**, *52*, 10253-10256. **IF: 6.567**; Journal Ranking **20/157** Chemistry, Multidisciplinary
- 130 Rananaware, A.; Gupta, A.; Li, J.; Bilic, A.; Jones, L.; Bhargava, S.; **Bhosale, S. V.** A four-directional non-fullerene acceptor based on tetraphenylethylene and diketopyrrolopyrrole functionalities for efficient photovoltaic devices with a high open-circuit voltage of 1.18 V. *Chem. Commun.* **2016**, *52*, 8522-8525. **IF: 6.567**; Journal Ranking **20/157** Chemistry, Multidisciplinary
- 129 Chen, J. Y.; Yuan, B.; Li, Z. Y.; Tang, B.; Gupta, A.; **Bhosale, S. V.**; Wang, X. G.; Li J. L. Synergistic co-assembly of two molecular gelators. *Langmuir*, **2016**, *32* (46), pp 12175–12183. **IF: 3.993**.
- 128 Bhosale, R. S.; Shitre, G. V. , Kumar, R.; **Bhosale, S. V.**; Biradar, D.;Narasayan, R; Bhosale, S. V. A 8-Hydroxypyrene-1,3,6-trisulfonic acid trisodium salt (HPTS) based colorimetric and green turn-on fluorescent sensor for the detection of arginine and lysine in aqueous solution. *Sensors and Actuators B* **2016**, <http://dx.doi.org/10.1016/j.snb.2016.10.002>. **IF: 4.758**; Journal Ranking **8/74** Analytical Chemistry
- 127 Rananaware, A.; Abraham, A. N.; La, D. D.; Mistry, V.; Shukla, R.; **Bhosale, S. V.** Synthesis and multiple functionalities of a tetraphenylethene-substituted tetrapyrrolium salt: mechanochromic, cancer

- cell imaging and DNA marker. *Aus. J. Chem.* **2017**, *70*, 652-659. **IF: 1.558**; Journal Ranking 73/157 Chemistry, Multidisciplinary
- 126 La, D. D.; Rananaware, A.; Salimimarand, M.; **Bhosale, S. V.** Well-dispersed assembled porphyrin nanorods on graphene for the enhanced photocatalytic performance. *ChemistrySelect* **2016**, **DOI: 10.1002/slct.201601001**.
- 125 Bhosale, R. S.; Kelson, M.M.A.; Bhosale, S. V.; Bhargava, S. K.; Bhosale, S. V. Amphiphilic push-pull iminocoumarin for colorimetric selective fluoride anion sensing, *Materials Today: Proceedings*, **2016**, *3*, 1883-1889. **IF: N/A**.
- 124 Jackson, S. L.; Rananaware, A.; Rix, C.; **Bhosale, S. V.**; Latham, K. A highly fluorescent metal-organic framework for the sensing of volatile organic compounds. *Crystal Growth & Design*, **2016**, *16*, **3067–3071**. **IF: 4.425**; Journal Ranking 24/157 Chemistry, Multidisciplinary; 1/23 Crystallography & 31/260 Material Science, Multidisciplinary
- 123 Bobe, S. R.; Gupta, A.; Rananaware, A.; Bilic, A.; Xiang, W.; Li, J.; **Bhosale, S. V.**, Bhosale, S. V., Evans, R. A. Insertion of a naphthalenediimide unit in a metal-free donor–acceptor organic sensitizer for efficiency enhancement of a dye-sensitized solar cell *Dyes and Pigments* **2016**, *134*, 83-90. **IF: 3.966**; Journal Ranking **1/22** Material Science & **5/72** Chemistry Applied.
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## **Presentation/Conferences**

- 38 **Bhosale S. V.** Supramolecular Chemistry: Functional Structures on the Nanoscale Level, Invited talk at IWAMSN2016 – Halong Bay, Vietnam on Nov. 8, **2016**.
- 37 **Bhosale S. V.** Constructing smart functional material from small organic molecules, Invited talk at 23<sup>rd</sup> IUPAC Conference on Physical Organic Chemistry (ICPOC23), 3<sup>rd</sup>–8<sup>th</sup> July 2016 Sydney • Australia.
- 36 **Bhosale S. V.** Functional Organic Material Based on Yoctowells, Invited talk at Institute for Frontier Materials (IFM) - Deakin University, Geelong, Australia on May 22, **2016**.
- 35 **Bhosale S. V.** Supramolecular Chemistry: Functional Structures on the Nanoscale Level, at International Symposium on Photonics Applications and Nanomaterials (ISPAN2015) held at Thiruvananthapuram, Kerala, India on October 28-30, **2015**.
- 34 **Bhosale S. V.** Vesicles made of kanamycin A 6'-pyrenylamide amphiphile in acetonitrile/water mixture, at 2<sup>nd</sup> International Workshop on Corrosion and Protection of Materials held at Hanoi, Vietnam 26-29 October **2015**.
- 33 **Bhosale S. V.** Constructing Smart Products from at International Smart Materials, at International Symposium on Molecular Design, RMIT University, Australia on Monday 16th November **2015**.
- 32 **Bhosale, S. V.** Supramolecular Chemistry: Functional Structures on the Nanoscale, at Recent Advances In Nano Science And Technology (RAINSAT-2015), deliver invited talk at Sathyabama University, India on July 8-10, **2015**.
- 31 Poster Presentation: Rananaware A., **Bhosale, S. V.** Turn on fluorescence in Pyridyl based tetraphenylethylene: For ratiometric fluorescent detection of intracellular pH, at SEH College symposium HDR Student Conference, RMIT on Oct 17, **2014**.
- 30 **Bhosale S. V.** Supramolecular assembled yoctowells on magnetic nanoparticles as a simple model system for drug delivery, at 2<sup>nd</sup> International conference on Global Trends in Pure and Applied Chemical Sciences, Hong Kong on October 3-4, **2014**.
- 29 Jackson, S. L.; Rananaware, A.; Rix, C.; **Bhosale, S. V.**; Latham, K. Clathrate structural changes in novel tetrapyridyltetraphenylethylene metal organic frameworks, at 2<sup>nd</sup> International conference on Global Trends in Pure and Applied Chemical Sciences, Hong Kong on October 3-4, **2014**.
- 28 **Bhosale S. V.** Investigation of Yoctowells on the basis of Modeling Nanospace, at 2<sup>nd</sup> International conference on Advance Functional Material, Trivandrum, India on February 19-21, **2014**.
- 27 Functional Organic Material Based on Yoctowells, at RACI Biomolecular Division Conference 2013, held in Fairmont Resort Blue Mountains, New South Wales, Australia on July 14-17, **2013**.

- 26 **Bhosale S. V.** Functional Organic Material, at 1<sup>st</sup> International Conference on Chemistry and Material: Prospects and Prospectives 2012, held in Lucknow, India on November 14-15, **2012**.
- 25 **Bhosale S. V.** Attended the Australian Academy of Science Early Mid Career meeting at Canberra, Australia on Oct 3, **2012**.
- 24 **Bhosale S. V.** Delivered invited lecture at Flinders University, Adelaide, Australia on Jan 23, **2012**.
- 23 **Bhosale S. V.** Delivered invited lecture at RMIT University, Melbourne, Australia on Nov 21, **2011**.
- 22 **Bhosale S. V.** The Development of Yoctowells to Study Surface-Engineered Phenomenon & Supramolecular Assembly of Naphthalene Diimides, at 2<sup>nd</sup> International Symposium on Nanotechnology, held in Kochi, India on November 17-19, **2010**.
- 21 **Bhosale S. V.** Yoctoliter-Sized Vessels as a Receptors & Nanostructured Soft Material of Core-Substituted Naphthalene Diimides, at 3<sup>rd</sup> European chemistry congress held in Nuremburg, Germany on Aug 29-Sept 3, **2010**.
- 20 Shortlisted for *2010 European Young Chemist Award lecture: Bhosale S. V.* Yoctoliter-Sized Vessels as a Receptors & Nanostructured Soft Material of Core-Substituted Naphthalene Diimides, at 3<sup>rd</sup> European chemistry congress held in Nuremburg, Germany on Aug 29-Sept 3, **2010**.
- 19 **Bhosale S. V.** Title: The development of yoctowells as a basis for modeling biological systems, at 5<sup>th</sup> International Symposium on Macrocyclic and Supramolecular Chemistry (ISMCS) held in Nara, Japan on June 6-10, **2010**.
- 18 **Bhosale S. V.** Concept Transfers from Nature, meeting at New York University, New York, USA on Dec. 15, **2009**.
- 17 **Bhosale S. V.** 34<sup>th</sup> Annual Organic Synthesis Symposium, the University of Melbourne Australia on Dec. 4, **2009**.
- 16 **Bhosale S. V.** Development in Utilising Yoctowell for Investigation in Nanospace, at 1<sup>st</sup> International Symposium on Nanotechnology held in Kochi, India on August **2009**.
- 15 **Bhosale S. V.** Yoctoliter-Sized Vessels as Receptors” at 4<sup>th</sup> International Symposium on Macrocyclic and Supramolecular Chemistry held in Maastricht, the Netherlands on July **2009**.
- 14 **Bhosale S. V.** Zinc-porphyrin Based Hydrophobic Yoctowells as Receptors, in RACI Organic08 held in Hobart, Tasmania, Australia on Dec. **2008**.
- 13 **Bhosale S. V.** Concept Transfers from Nature, at Engineering of Advanced Materials Friedrich Alexander University Erlangen-Nuremburg, Germany on Nov 25, **2008**.

- 12 **Bhosale S. V.** Concept Transfers from Nature, at Zernike Institute, University of Groningen, Netherland on Nov 4, **2008**.
- 11 **Bhosale S. V.** on the topic Concept Transfers from Nature (Yoctowell Chemistry and Chemistry of NDIs, at Symposium of Soft Matters at Freiburg Institute of Advanced Studies, Albert-Ludwig's University of Freiburg, Germany on Oct **2008**.
- 10 Attended 33<sup>rd</sup> Annual Synthesis Symposium (Dec. **2008**), the University of Melbourne.
- 9 Drug Design and Nanotechnology, Nanded, India (Jan 27-29, **2008**): Rigid Rod  $\pi$ -Stack for Artificial Photosynthesis and Yoctowell Based Supramoleclar Systems and Construction and Use of Yoctowells as Vessels for Sensing and Artificial Photosynthesis
- 8 Delivered series of invited lectures to few universities in Maharashtra state, India, namely: *Shivaji University Kolhapur; National Chemical Laboratory, Pune; Yeshwant Mahavidalaya Nanded; Dynopasak Mahavidalaya Prabhani and Maharashtra Udagari Mahavidalaya Udgir* on the topic: "Yoctowell based Supramolecular Systems and Artificial Photosynthesis with Rigid-Rod  $\pi$ -Stack Architecture in Lipid Bilayer Membranes" in Nov-Dec **2007**.
- 7 Attended 31<sup>st</sup> Annual Synthesis Symposium (Dec **2006**), the University of Melbourne.
- 6 **Bhosale S. V.** Title: Transmembrane Rigid-rod  $\pi$ -stack Architecture for Artificial Photosynthesis, 1<sup>st</sup> European Chemistry Congress held in Budapest, Hungary on Sept **2006** and Invited for book chapter *in Tomorrows Chemistry Today, Wiley 2008*.
- 5 **Invited Lecture: Bhosale S. V.** Rigid-Rod  $\pi$ -Stack Architecture for Artificial Photosynthesis in Lipid Bilayer Membranes **Oppolzer Lecture** at University of Geneva on Oct 7, **2005**.
- 4 **Bhosale S. V.** Transmembrane Rigid-rod  $\pi$ -stack Architecture, at Swiss Chemical Society Annual Fall Meeting, University of Lausanne, Oct 13, **2005**, Invited to contribute to *Chimia, 2005, 59, 581*.
- 3 **Poster Presentation: Bhosale S. V.** 10 Cubic Nanometer Immobile Water Volume in Nanowells, at XV<sup>th</sup> International Conference on Horizon in Hydrogen Bond Research at Freie Universität Berlin on Sept. **2003**.
- 2 Deliver talk: **Bhosale S. V.** 10 Cubic Nanometer Immobile Water Volume in gaps, Graduate Student Research School on Hydrogen Bonding and Hydrogen Transfer, Freie Universität Berlin on Sept 15-16, **2003**.
- 1 Deliver talk: **Bhosale S. V.** Counting of tyrosine molecules in 2 nm gaps by solid state NMR, at Graduate Student Research School on Hydrogen Bonding and Hydrogen Transfer, Freie Universität Berlin on June 30, **2003**.

## Other Information

### Research Experience and Positions

Dr. Bhosale has worked for several different organizations in various countries that include India, Germany, Switzerland and currently Australia. Within a short amount of time, he has established a very good reputation at the international level, and his exceptional international experience and research excellence have given him the dynamic background needed to make a significant contribution to the scientific community in areas associated with advanced technology. In total he has published **167 peer reviewed publications with 90% of publications in A\*/A journals** including **15 cover page articles** and **overall citations are >3700** and **7 book chapters** on his credit along with **invited talk/key notes in 38 conferences**. His h-index is **28**, and i-index **76**. This was evaluated by according to Google scholar.

Dates	Position	Affiliation	Supervisor
Jan. 2018-present	Professor (UGC-FRP)	Goa University	
Jan. 2016 –Dec. 2017	Senior Research Fellow	RMIT University, Melbourne, Australia	
Dec 8, 2011-Dec. 2015	ARC Future Fellow	RMIT University, Melbourne, Australia	
Aug 15, 2009-Nov 3, 2011	Lecturer	Monash University, Clayton Victoria, Australia	
Oct 3, 2006-Aug 14, 2009	ARC-APD Fellow	Monash University, Clayton Victoria, Australia	
Mar 3, 2005 – Sept 30, 2006	Roche Foundation Postdoctoral Fellow	University of Geneva Switzerland	Prof. Stefan Matile
Dec 16 2005-Mar 1, 2005	Postdoctoral Fellow	Freie Universität Berlin, Berlin, Germany	Prof. J.-H. Fuhrhop
Sept 8, 1999-Dec 20, 2001	Project Assistant	National Chemical Laboratory, Pune, India	Dr. M. K. Gurjar

### **Editorial**

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4. **Technical Editor:** Noble Science Publishers (<http://www.noblesci.com/physical.html>)
5. **Editorial Advisory Board** of Advancements in Science (<http://www.ajournals.com/index.php/eb>)
6. **Members of Editorial Board:** INTERNATIONAL JOURNAL OF CHEMISTRY (Int. J. Chem.)
7. Guest Editor of two journals: *Molecules* ([http://www.mdpi.com/journal/molecules/special\\_issues/naphthalene\\_diimides](http://www.mdpi.com/journal/molecules/special_issues/naphthalene_diimides)) and *Nanomaterials* ([http://www.mdpi.com/journal/nanomaterials/special\\_issues/porphyrin\\_nano](http://www.mdpi.com/journal/nanomaterials/special_issues/porphyrin_nano))

- Dr. Bhosale examines theses from National and International Universities
- Dr. Bhosale also effective working as a reviewer for journal articles and reviews including: ACS, RSC, Wiley-VCH such as *JACS*, *Chem. Commun.*, *Chem. Soc. Rev.*, *New. J. Chem.*, *Org. Biomol. Chem.*, *Org. Lett.*, *J. Org. Chem.*, *J. Mat. Chem.*, *Aus. J. Chem.*, *Chem. Asian. J.*, *J. Photobio and photochem*, *Synlett*, *Lett. Org. Chem.*, *J Chinese Chemical Letters*, *Journal of Receptor, Ligand and Channel Research*, *J. Current Chemical Research*, *Phys. Chem. Chem. Phys* and *Macromolecules* etc.

## Research Highlights

### 1) Research in News:

My group research efforts at RMIT have received significant media release. This is partly because I have been recognised for the high quality research undertaken by my group that has direct relevance for our communities.

#### i) Recent work on Yoctowell drug delivery system (*Scientific Reports*)

3, Article number: 1982

doi:10.1038/srep01982) work has been media release on following news:

1. RMIT News: <http://rmit.net.au/browse;ID=u7fzgu3ftytw>
2. Nursing Review, July 4, 2013; <http://www.professionalpharmacy.com.au/new-technology-to-improve-healthcare/>
3. Sci. Rep. News Tuesday, 02 July 2013: Science Alert: <http://www.sciencealert.com.au/news/20130207-24529.html>
4. News in Nano werk: <http://www.nanowerk.com/news2/newsid=31121.php>
5. PHYS ORG NEWS: <http://phys.org/news/2013-07-drug-technology-health.html#jCp>  
<http://www.ne3ls.ca/drug-technology-to-improve-health-care/?lang=en>
6. News WILBERT Wildauer Bücher+E-Medien Recherche-Tool:  
<http://wilbert.kobv.de/authorSearch.do;jsessionid=8F19C5DBDB0C5D4ED459717C086F04FB?query=Sheshanath+V.+Bhosale&plv=1>
7. Mount Carmel: <http://mountcarmel.salearchive.com/2013/07/05/Drug-technology-to-improve-health-care/>
8. The EDGE: Science, Astronomy and Research News: <http://mabsj2.blogspot.com.au/2013/07/scientific-reports-chemistry-table-of.html>
9. Nanotechnology Israel News: <http://www.nanotechnology.org.il/index.php?ln=en&action=news&cid=14&news=278>

#### ii) Dr. Bhosale's work recently work on artificial flowers have been published in Nature's Sci. Rep.

<http://www.nature.com/articles/srep14609>, and work has been highlighted in various news:

- 1) <http://www.sciencedaily.com/releases/2015/09/150929070224.htm>
- 2) [www.mywebmemo.com/technology/blooming-microflowers-open-new-electronic-frontiers\\_408832.html](http://www.mywebmemo.com/technology/blooming-microflowers-open-new-electronic-frontiers_408832.html)
- 3) [http://www.mywebmemo.com/technology/blooming-microflowers-open-new-electronic-frontiers\\_408832.html](http://www.mywebmemo.com/technology/blooming-microflowers-open-new-electronic-frontiers_408832.html)
- 4) <http://medianet.com.au/releases/release-details?id=840001>
- 5) <https://www.newscientist.com/article/dn28263-first-artificial-microflowers-burst-into-bloom-in-a-few-hours/>
- 6) <http://www.electroline.com.au/content/components/news/self-assembling-microflowers-open-new-electronic-frontiers-629862154>
- 7) <http://www.businessinsider.com.au/science-has-created-tiny-artificial-flowers-which-bloom-in-three-hours-2015-9>

- 8) Gizmodo UK, 01 Oct: <http://www.gizmodo.co.uk/2015/10/these-microflowers-bloom-from-organic-chemicals-in-three-hours/>
- 9) Gizmodo, 01 Oct: <http://gizmodo.com/these-microflowers-bloom-from-organic-chemicals-in-3-ho-1733963147>
- 10) Wired.co.uk, 02 Oct: <http://www.wired.co.uk/news/archive/2015-10/01/microflowers-pictures-chemical-reaction>
- 11) Materials Today, 03 Oct: <http://www.materialstoday.com/nanomaterials/news/self-assembling-microflowers-are-blooming-lovely/>
- 12) Mental Floss, 02 Oct  
<http://mentalfloss.com/article/69318/chemical-reaction-creates-gorgeous-blooming-microflowers>
- 13) Wopular, 02 Oct: <http://www.wopular.com/self-assembling-artificial-microflower-blooms-three-hours>
- 14) Wopular, 02 Oct: <http://www.wopular.com/self-assembling-artificial-microflower-blooms-three-hours>
- 15) Engadget, 04 Oct: <http://www.engadget.com/2015/10/04/microflower-research/>
- 16) Conowego.pl, 04 Oct: <http://www.conowego.pl/aktualnosci/oto-kwiaty-ktorych-nie-zobaczysz-golym-okiem-14789/>
- 17) AppleZA, 04 Oct: [http://www.appleza.co.za/10-micron-wide-flowers-can-bloom-just-like-the-real-thing/?utm\\_source=feedburner&utm\\_medium=feed&utm\\_campaign=Feed%3A+appleza+%28AppleZA%29](http://www.appleza.co.za/10-micron-wide-flowers-can-bloom-just-like-the-real-thing/?utm_source=feedburner&utm_medium=feed&utm_campaign=Feed%3A+appleza+%28AppleZA%29)
- 18) Gizmodo Australia, 05 Oct: <http://www.gizmodo.com.au/2015/10/these-microflowers-bloom-from-organic-chemicals-in-3-hours/>
- 19) Madshrimps, 05 Oct: <http://www.madshrimps.be/news/item/138619>
- 20) <http://www.independent.co.uk/news/science/science-creates-microflowers-bloom-grow-rmit-india-institute-a6679946.html>
- 21) <https://www.scimex.org/newsfeed/blooming-microflowers-open-new-electronic-frontiers>
- 22) [http://realtimenews.eu/uk/scientists-have-created-tiny-microflowers-that-can-grow-an\\_21479.html](http://realtimenews.eu/uk/scientists-have-created-tiny-microflowers-that-can-grow-an_21479.html)
- 23) PDM Productos Digitales Móviles, 06 Oct: <http://pdm.com.co/microflores-crecen-de-quimicos-organicos-en-3-horas/>

- iii) Dr. Bhosale's work on pH sensor (*Chem. Eur. J.* **2013**, DOI: 10.1002/chem.201300120) has been highlighted in ChemPubSoc Europe: Tuning a pH Sensor by Anne Deveson Published Date: 11 May 2013; [http://www.chemistryviews.org/details/ezone/4631241/Tuning\\_a\\_pH\\_Sensor.html](http://www.chemistryviews.org/details/ezone/4631241/Tuning_a_pH_Sensor.html)
- iv) Construction of Construction of trimeric porphyrin-fullerene-porphyrin stacks within yoctowells (*Chem Commun.* **2009**, 3166-3168) has been **highlighted** in German newspaper: <http://www.chemeurope.com/en/news/100892/fullerenes-well-trapped.html>.
- v) Dr. Bhosale's work on artificial photosynthesis (Science 2006) was highlighted in C&E and German newspaper. Work also highlighted in *Science*, 2006, *313*, 51-52; by Kinbara, K.; Aida, T. "From Electron Pump to Proton Channel".
- vi) Dr. Bhosale's work **Semiconductive fabric soaks up oil spills while fighting bacteria and pollutants** Gizmag, 19 Apr RMIT Research (Sheshanath Bhosale)
  1. <http://www.gizmag.com/semi-conductive-fabric-oil-spills/42873/>
  2. <http://www.sustainabilitymatters.net.au/content/waste/news/semiconducting-nanostructures-for-mopping-up-oil-spills-605879640>
  3. <http://www.gizmodo.com.au/2016/04/australian-scientists-grow-nanostructures-on-fabric-now-it-can-mop-up-oil-spills/>
  4. <https://blog.csiro.au/mopping-oil-spills-nano-fabric/>



2) **Cover art for the journals:** Due to high quality of my research, it has been highlighted on the Cover Pages of following 15 prestigious journals.

**EurJOC**  
European Journal of Organic Chemistry

19/2013  
www.eurjoc.org

Supramolecular Chemistry of Porphyrins IX and Its Derivatives

Cover Picture / Microscopic  
Sheshanath V. Bhosale, Subhash K. Bhosale et al.  
Supramolecular Chemistry of Porphyrins IX and Its Derivatives

A journal of  
**ChemPubSoc**  
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**WILEY-VCH**

Online journal of Management of Organic Chemistry  
ISSN 1522-2675 (print) ISSN 1522-2683 (online)

**Organic & Biomolecular Chemistry**

Volume 11 | Number 10 | 18 August 2013 | Pages 2062-2068

Synthetic strategy

Molecular arrangement

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**ChemComm**  
Chemical Communications

Volume 11 | Number 11 | 14 June 2013 | Pages 1025-1036

RSCPublishing

COMMUNICATION  
Sheshanath V. Bhosale, Subhash K. Bhosale, Steven L. Campbell and Brian A. Howell  
Supramolecular porphyrin-adsorbed graphite oxide-walls  
www.rsc.org/chemcomm

**ChemComm**  
Chemical Communications

Volume 11 | Number 27 | 28 July 2013 | Pages 5851-5858

Showing research from Sheshanath V. Bhosale's research group, Monash University, Australia

Supramolecular construction of vesicles based on non-substituted naphthalene diimide expanded with urea by low yield results.

The supramolecular self-assembly of the non-substituted NDI bearing a barbituric glycol-urea leads to the formation of stable vesicles in DMF and CH<sub>2</sub>Cl<sub>2</sub>/MeOH (4:1 v/v) solvent mix.

The transmission electron microscopy image shows the structure and size-distribution of the vesicles in detail.

As featured in  
**ChemComm**

See Sheshanath V. Bhosale et al., Chem. Commun., 2013, 47, 5851

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**ChemComm**  
Chemical Communications

Volume 11 | Number 27 | 28 July 2013 | Pages 5851-5858

Self-Assembly of Novel Porphyrins

RSCPublishing

COMMUNICATION  
Sheshanath V. Bhosale et al.  
Supramolecular construction of vesicles based on non-substituted naphthalene diimide expanded with urea by low yield results.

FEATURE ARTICLE  
Sheshanath V. Bhosale  
Supramolecular construction of vesicles based on non-substituted naphthalene diimide expanded with urea by low yield results.

**AUSTRALIAN JOURNAL OF CHEMISTRY**

AN INTERNATIONAL JOURNAL FOR CHEMICAL SCIENCE

Volume 61, Part 5, 2013

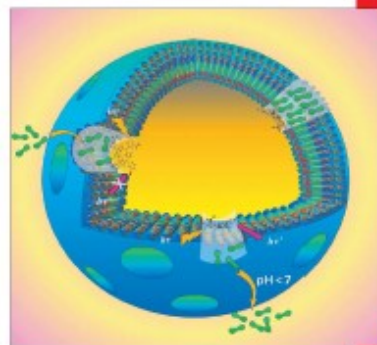
Self-Assembly of Novel Porphyrins

www.publish.csiro.au/journal/ajc

# CHEMISTRY

A European Journal

www.chemeurj.org



**Concept**  
Metal-Organic Frameworks From Molecular Metal Ions to Crystals to Superstructures  
D. Maspoch et al.

ISSN 0950-4230 CODEN CHEMDE Volume 16 | Issue 18 | 2014



2014-20/18



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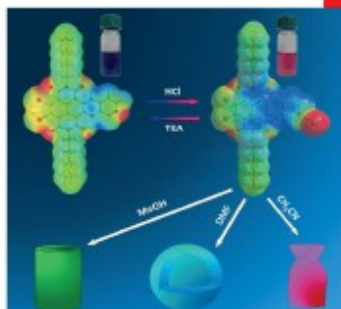
WILEY-VCH

# CHEMISTRY

A EUROPEAN JOURNAL

19/23

2013



**Solvophobic-controlled self-assembly...**

of the core-substituted naphthalene dimide having rigid aryls leads to the formation of a variety of macrocyclic filaments, tubules and spherical morphologies, see abstract with left illustration. The behavior of PC in the combined UV-Vis and fluorescence experiments, as well as the related runs with a change in water flow is only fully rational by the addition of hydrophobic, but more details, see the ChemistryEurope.org 19/23 abstract at p. 3176

WILEY-VCH



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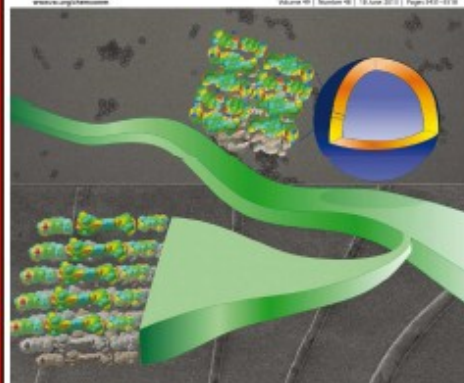
www.chemistryeurope.org

# ChemComm

Chemical Communications

www.rsc.org/chemcomm

Volume 40 | Number 46 | 18 June 2013 | Pages 458-478



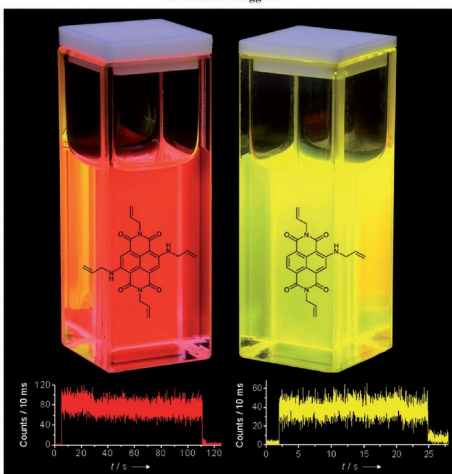
DOI: 10.1039/C3CC51247E

RSC Publishing

**COMMUNICATION**  
Thiopyran(2,3-dithiane) derivatives as photocatalysts for self-assembly into nanowires  
A. P. Kozlov et al. *Chemical Communications*, 2013, 40, 458-461. DOI: 10.1039/C3CC51247E

## Synthesis and Photophysics of Core-Substituted Naphthalene Dimides: Fluorophores for Single Molecule Applications

Toby D. M. Bell,<sup>[a]</sup> Sheryll Yap,<sup>[a]</sup> Chintan H. Jani,<sup>[b]</sup> Sheshanath V. Bhosale,<sup>[b]</sup> Johan Hofkens,<sup>[c]</sup> Frans C. De Schryver,<sup>[c]</sup> Steven J. Langford,<sup>[b]</sup> and Kenneth P. Ghiggino<sup>[a]</sup>



42 | **InterScience** | © 2009 Wiley-VCH Verlag GmbH & Co. KGaA, Weinheim | Chem. Asian J. 2009, 4, 1542-1559

# Organic & Biomolecular Chemistry

www.rsc.org/obc

Volume 4 | Number 16 | 21 August 2006 | Pages 2997-3176



DOI: 10.1039/06OB00000A

RSC Publishing

**EMERGING AREA**  
Sofia M. Kelly et al.  
Synthetic functionalized carbon nanotubes in liquid dispersions

**Chemical Science**  
In this issue...



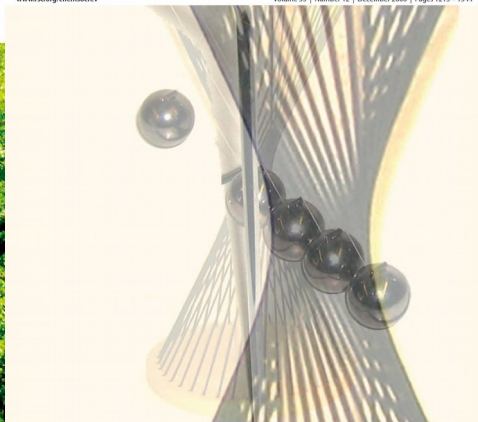
1473-0502(2006)4:16:1-T

# Chem Soc Rev

Chemical Society Reviews

www.rsc.org/chemsocrev

Volume 35 | Number 12 | December 2006 | Pages 1213-1344



ISSN 0306-0012

RSC Publishing

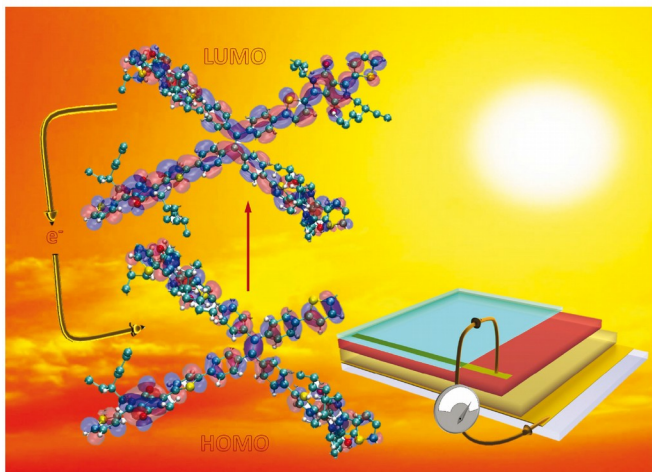
**CRITICAL REVIEW**  
Adam L. Simon, Mohammed Raza Shah, Shobanath Brindha and Stefan Mable  
Synthetic ion channels and pores (2004-2005)

**TUTORIAL REVIEW**  
Lisa A. Sloan and David J. Procter  
Langmuir-Blodgett monolayers in solid phase synthesis



0306-0012(2006)35:12:1-R





Showcasing the work of Dr Sheshanath V. Bhosale and Dr Akhil Gupta and their research groups at RMIT and Deakin University in Australia

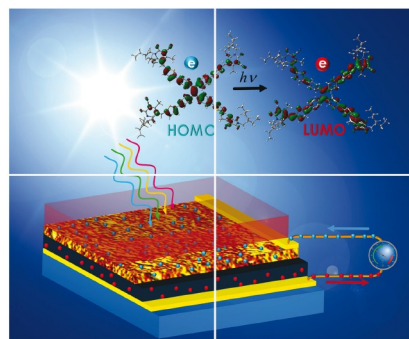
A four-directional non-fullerene acceptor based on tetraphenylethylene and diketopyrrolopyrone functionalities for efficient photovoltaic devices with a high open-circuit voltage of 1.18 V

Joint work by RMIT and Deakin University groups reported a four-directional non-fullerene electron acceptor providing a PCE of 3.86% with an excellent high  $V_{oc}$  of 1.18 V with the archetypal donor P3HT.

As featured in:



See Akhil Gupta, Sheshanath V. Bhosale et al., *Chem. Commun.*, 2016, 52, 8522.



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 N. V. Ghule et al.  
 Synthesis and Liquid Crystalline Properties of Unsymmetrically Substituted Naphthalenediimides with a Polar Headgroup: Effect of Amide Hydrogen Bonding and Alkyl Chain Length

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1/07  
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Front Cover:  
 Akhil Gupta, Sheshanath V. Bhosale, and Sheshanath V. Bhosale et al.  
 A Triphenylamine–Naphthalenediimide–Fullerene Triad: Synthesis, Photoinduced Charge Separation and Solution-Processable Bulk Heterojunction Solar Cells

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