Curriculum Vitae

Dr. Anindita Das
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PROFESSIONAL CAREER

- **Assistant Professor** at IACS (since August 2019)
- **Faculty Fellow** at IACS (August 2017 to August 2019).
- **Postdoctoral Fellow** (April-2016 to July 2017): Institute for Complex Molecular Systems and Laboratory of Macromolecular and Organic Chemistry, Eindhoven University of Technology, The Netherlands (Research Advisor- Professor E. W. Meijer).
- **Alexander von Humboldt Postdoctoral Fellow** (October-2014 to March-2016): Institute for Technical and Macromolecular Chemistry, University of Hamburg, Germany (Research Advisor-Professor Patrick Theato).
- **Postdoctoral Fellow** (April-September, 2014): Polymer Science Unit, Indian Association for the Cultivation of Science, Kolkata, India (Research Advisor- Professor Suhrit Ghosh).

EDUCATION

- **Ph.D.** (2009-2014): Thesis Title: Hydrogen-Bonding Induced Assembly of Aromatic Donor-Acceptor Gelators and Chromophore-Conjugate Amphiphilic Macromolecules; Degree awarded on 29.04.14): Polymer Science Unit, Indian Association for the Cultivation of Science, Kolkata, India (Research Advisor- Professor Suhrit Ghosh)
- **M.Sc.** (2007-2009): Organic Chemistry: University of Calcutta, Kolkata, India.
- **B.Sc.** (2004-2007): Chemistry (Major): University of Calcutta, Kolkata, India.
- **Higher Secondary**: (2002-2004): Major (Science): CISCE board, New Delhi, India.
- **Secondary**: (2000-2002): CISCE board, New Delhi, India.

AWARDS AND ACHIEVEMENTS

- **Honorable Mention Award (for PhD thesis) in the IUPAC-Solvay International Award (2015)** for Young Chemists.
- **Alexander von Humboldt Postdoctoral Fellowship**, Germany (Since October 2014).
- **Best poster award** at In-house Symposium, IACS, Kolkata, India, February 28, 2014.
- **Best poster award** at Indo-US Bilateral Symposium on Bio-inspired Supramolecular and Polymer Assembly, The Travancore Heritage, Kerala, India, December 15-17, 2013.
- **Best poster award** at PRC 2012, Centre for Research in Nanoscience & Nanotechnology, University of Calcutta, Kolkata, India, October 12-13, 2012.
- **Best poster award** at 14th CRSI National Symposium in Chemistry, NIIST, Trivandrum, India, February 2-5, 2012.
- **Best poster award** at 11th International Symposium on Frontiers of Polymers and Advanced Materials (MACRO 2010), IIT Delhi, Delhi, India, December 15-17, 2010.
- **Qualified the joint CSIR-UGC** National Eligibility Test (NET) for Junior Research Fellowship held on Dec 2008.
- **D. C. Mukherjee Gold Medal** award for securing the highest marks in B.Sc. in Chemistry Department at Vivekananda College, Kolkata, India (2007).
- **Vandana Chatterjee Memorial prize** for securing highest marks in I.S.C. among the schools of Behala & Thakurpukur zone, Kolkata, India (2004).

CURRENT RESEARCH INTEREST

At IACS our research interest is focused on the following areas:

- Multicomponent supramolecular assemblies driven by halogen-bonding interactions.
- Understanding the mechanism of supramolecular polymerization and pathway complexity in halogen-bonded systems.
- Supramolecular chirality, chiral induction and chiral luminescence in self-assembled materials.
- Dipole-dipole interaction mediated amphiphilic block copolymer assemblies in water.
- Supramolecular engineering in biodegradable polymers to regulate their thermal and mechanical properties.
- Crystallization driven macromolecular assembly in solutions.

TEACHING EXPERIENCE

- Offered Full Polymer Chemistry Course (Code: AIS 4202) to Integrated M.Sc.-Ph.D. and Ph.D. students at IACS in Spring Semester 2019.

- Offered Shared Polymer Chemistry Course (Code CH 425) to Integrated M.Sc.-Ph.D. and Ph.D. students at IACS in Spring Semester, 2018.
- Offered an advance Master's Degree Course on Supramolecular Chemistry at the University Of Hamburg, Germany.

RESEARCH FUNDING AS INDEPENDENT PI

- Early Career Research Award (***SERB-DST, India)***
- ***CSIR, India***

INVITED TALKS AND POSTER PRESENTATIONS

- **A. Das,** "Halogen Bonding in Supramolecular Polymerization", **Symposium on Polymer Science 2019,** organized by IISER-Kolkata under Society of Polymer Science, Kolkata Chapter, July 5-6, 2019. (*Invited Lecture*)
- **A. Das**, "Macromolecular Assembly by Orthogonal Non-covalent Interactions", **SAIS Symposium 2019,** School of Applied and Interdisciplinary Sciences, March 8-9 2019, IACS, Kolkata. (*Invited Lecture*)
- **A. Das**, "Programming Macromolecular Assembly by Orthogonal Non-covalent Interactions", **SPSI-MACRO 2018**, December 19-22, 2018, IISER-Pune & NCL-Pune, India. (*Invited Lecture*)
- **A. Das**, "A Plastic Story: Breaking and Making," **Alexander von Humboldt Annual Meeting,** Hamburg, Germany, October 30-31, 2015. (*Invited Lecture*)
- **A. Das** and S. Ghosh, "New Possibilities in Post-Polymerization Modifications: Teaching an old dog new trick!," **MACRO 2015, International Symposium on Polymer Science and Technology**, IACS, Kolkata, India, January 23-26, 2015. (*Poster Presentation*)
- **A. Das** and S. Ghosh, "Synthetic Venus Flytrap," In-house Symposium, IACS, Kolkata, India, February 28, 2014. (*selected for the best poster award)*
- **A. Das** and S. Ghosh, "Self-assembly of naphthalene diimide (NDI) by orthogonal H-bonding and its co-assembly with pyrene by pseudo intra-molecular charge-transfer (CT)-interaction," **Indo-US Symposium on Bioinspired Supramolecular and Polymeric Materials**, The Travancore Heritage Resort, Kerala, India, December 15-17, 2013. (*selected for the best poster award)*
- **A. Das** and S. Ghosh, "Luminescent Invertible Polymersome from Highly Stable Self-Assembly of Naphthalene-diimide (NDI)-end-Functionalized Amphiphilic Polymer," **Indo-US Symposium on Molecular Materials**, IISC, Bangalore, India, July 15-17, 2013. (*Poster Presentation*)

- **A. Das**, M. R. Molla and S. Ghosh**, "**Role of Hydrogen-bonding in Programmed Supramolecular-Assembly of Donor and Acceptor Chromophores: Co-stacking or Self-sorting?," **Gordon Research Conference on Self-Assembly and Supramolecular Chemistry**, Les Diablerets Conference Centre in Les Diablerets, Switzerland, May 5-10, 2013. (*Poster Presentation*)
- **A. Das**, M. R. Molla and S. Ghosh**, "**A Generalised and Robust Supramolecular Strategy for Self-sorted Assembly of Donor (D) and Acceptor (A) Organogelators," **Gordon Research Seminar on Self-Assembly and Supramolecular Chemistry**, Les Diablerets Conference Centre in Les Diablerets, Switzerland, May 4-5, 2013. (*Poster Presentation*)
- **A. Das** and S. Ghosh, "A Generalized Supramolecular Design for Self-sorted Assembly of Donor and Acceptor Chromophores," **Polymer & Rubber Technology for 21st Century, A Kaleidoscopic View of Research & Industrial Progress, PRC 2012**, Centre for Research in Nanoscience & Nanotechnology, University of Calcutta, India, October 12-13, 2012. (*selected for the best poster award)*
- **A. Das** and S. Ghosh, "A Generalized Supramolecular Design for Self-sorted Assembly of Donor and Acceptor Organogelators," **14th CRSI National Symposium in Chemistry**, NIIST, Trivandrum, India, February 2-5, 2012. (*selected for the best poster award*)
- **A. Das** and S. Ghosh, "Contrasting Role of Urea and Amide Groups in Supramolecular Polymerization of Dialkoxynaphthalene π-Systems," **11th International Symposium on Frontiers of Polymers and Advanced Materials (MACRO 2010)**, IIT Delhi, India, December 15-17, 2010. (*selected for the best poster award*)

List of Publications

Peer-Reviewed Journals

(23) A. Jamadar, **A. Das***, "pH-Responsive Graftable Supramolecular Polymer with Tailorable Surface Functionality by Orthogonal Halogen Bonding and Hydrogen Bonding", ***Polym.Chem.,*** **2019,** DOI: 10.1039/C9PY00944B. (*Invited for Special Issue in Polymer Chemistry Emerging Investigators, 2019*)

(22) **A. Das,** K. Petkau-Milroy, G. Klerks, B. van Genabeek, R. P. M. Lafleur, A. R. A. Palmans, E. W. Meijer, "Consequences of Dispersity on the Self-Assembly of ABA-Type Amphiphilic Block Co-Oligomers", ***ACS. Macro. Lett.*** **2018,** *7*, 546-550.

(21) **A. Das,** G. Vantomme, A. J. Markvoort, Huub M. M. ten Eikelder, M. Garcia-Iglesias, A. R. A. Palmans, E. W. Meijer, "Supramolecular Copolymers - Structure and Composition Revealed by Theoretical Modeling," ***J. Am. Chem. Soc***. **2017**, *139*, 7036–7044.

(20) S. Lin, **A. Das** and P. Theato, "CO_2-Responsive Graft Copolymers: Synthesis and Characterization," ***Polym. Chem.*** **2017**, *8*, 1206-1216.

(19) **A. Das,** S. Lin and P. Theato, "Supramolecularly Cross-Linked Nanogel by Merocyanine Pendent Copolymer," ***ACS Macro Lett.*** **2017**, *6*, 50-55.

(18) **A. Das** and P. Theato, "Activated Ester Containing Polymers: Opportunities and Challenges for the Design of Functional Macromolecules," ***Chem. Rev.*** **2016,** *116*, 1434-1495.

(17) **A. Das** and S. Ghosh, "H-bonding directed programmed supramolecular assembly of naphthalene-diimide (NDI) derivatives," ***Chem. Commun.*** **2016**, *52*, 6860-6872.

(16) **A. Das** and P. Theato, "A Multifaceted Synthetic Route to Functional Polyacrylates by Trans-esterification of Poly(pentafluorophenyl acrylates)," ***Macromolecules*** **2015**, *48*, 8695-8707.

(15) A. Sikdar, **A. Das** and S. Ghosh, "Hydrogen-Bond-Regulated Distinct Functional-Group Display at the Inner and Outer Wall of Vesicles," ***Angew. Chem. Int. Ed.*** **2015**, *54*, 6755–6760.

(14) **A. Das** and S. Ghosh, "To assemble or fold?," ***Chem. Commun.*** **2014**, *50*, 11657-11660.

(13) **A. Das** and S. Ghosh, "Supramolecular Assemblies Driven by Charge-Transfer Interaction between Alternately Stacked Aromatic Donor and Acceptor Chromophores," ***Angew. Chem. Int. Ed.*** **2014**, *53*, 2038-2054.

(12) **A. Das** and S. Ghosh, "Stimuli Responsive Self-assembly of a Naphthalene Diimide (NDI) by Orthogonal H-Bonding and its Co-assembly with a Pyrene by a Pseudo Intramolecular Charge-Transfer Interaction," ***Angew. Chem. Int. Ed.*** **2014**, *53*, 1092-1097. (*Appeared as inside cover picture*)

(11) S. Maji, **A. Das**, P. K. Sarkar, A. Matya, S. Ghosh and S. Acharya, "Micrometer long oriented one-dimensional wires and two-dimensional sheets from a bis-urea functionalized dialkoxynaphthalene organogelator," ***RSC Adv.*** **2014**, *4*, 44650-44653.

(10) D. Basak**, A. Das** and S. Ghosh, "Hydrogen-bonding driven luminescent assembly and efficient Föster Resonance Energy Transfer (FRET) in a dialkoxynaphthalene-based organogel," ***RSC Adv.*** **2014**, *4*, 43564-43571.

(09) **A. Das**, B. Maity, D. Koley and S. Ghosh, "Slothful gelation of a dipolar building block by "top-down" morphology transition from microparticles to nanofibres," ***Chem. Commun.*** **2013**, *49*, 5757-5759.

(08) **A. Das** and S. Ghosh, "Luminescent Invertible Polymersome by Remarkably Stable Supramolecular Assembly of Naphthalene Diimide (NDI) π-system," ***Macromolecules*** **2013**, *46*, 3939-3949. *(Appeared as cover picture)*

(07) **A. Das**, M. R. Molla, B. Maity, D. Koley and S. Ghosh, "Hydrogen-bonding induced alternate-stacking of donor (D) and acceptor (A) chromophores and their supramolecular-switching to segregated states," ***Chem. Eur. J.*** **2012**, *18*, 9849-9859. *(Appeared as inside cover picture)*

(06) **A. Das**, M. R. Molla and S. Ghosh, "Comparative self-assembly studies and self-sorting of two structurally isomeric naphthalene-diimide (NDI)-gelators," ***J. Chem. Sci.*** **2011**, *123*, 963-973. (*Invited article in the special issue to remark the International Year of Chemistry)*

(05) **A. Das** and S. Ghosh, "A generalized supramolecular strategy for self-sorted assembly between donor and acceptor gelators," ***Chem. Commun.*** **2011**, *47*, 8922-8924. (*Most downloaded article in June 2011*)

(04) M. R. Molla, **A. Das** and S. Ghosh, "Chiral induction by helical neighbour: Spectroscopic visualization of macroscopic-interaction among self-sorted donor and acceptor π-stacks," ***Chem. Commun.*** **2011**, *47*, 8934-8936.

(03) **A. Das**, M. R. Molla, A. Banerjee, A. Paul and S. Ghosh, "Hydrogen-bonding directed assembly and gelation of donor-acceptor chromophores: Supramolecular reorganization from charge-transfer to self-sorted state," ***Chem. Eur. J.*** **2011**, *17*, 6061-6066. (*Appeared as inside cover picture*)

(02) **A. Das**, and S. Ghosh, "Contrasting Self-Assembly and Gelation Properties among Bis-urea and Bis-amide Functionalized Dialkoxynaphthalene (DAN) π-system," ***Chem. Eur. J.*** **2010**, *16*, 13622-13628.

(01) M. R. Molla, **A. Das**, and S. Ghosh, "Self-sorted Assembly in a Mixture of Donor and Acceptor Chromophores," ***Chem. Eur. J.*** **2010**, *16*, 10084-10093.

Book Chapter

A. Das, P. Rajdev and S. Ghosh, "Naphthalene-diimide (NDI) Nanofibre, Gel and Mesoscopic Material. A chapter contribution submitted for the book entitled "Naphthalenediimide and its congeners: from molecules to materials," (Ed. G. Dan Pantoș) Publisher-***Royal Society of Chemistry***, **2017**, 116-166.