CURRICULUM-VITAE

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Work Experience

Tenure	Position Held/Holding
07/2021 - Present	Assistant Professor, Department of Chemistry, Siksha Bhavana, **Visva-Bharati (A Central University)**, Santiniketan, Birbhum, West Bengal, India.
01/2020-05/2021	Post-doctoral Fellow, Supervisor: **Prof. Ronit Satchi-Fainaro** at Tel Aviv University, Israel.
04/2017 – 12/2019	Post-doctoral Fellow, Supervisor: **Prof. Suhrit Ghosh** at IACS Kolkata, India.
11/2015 – 03/2017	Post-doctoral Fellow, Supervisor: **Prof. Rainer Haag** at Freie Universität Berlin, Germany.

Education

Degree	University/ Institution
Ph. D. (2010-15)	**Freie Universität Berlin, Germany, Supervisor: Professor Rainer Haag**. **Thesis Title:** Polyglycerol Based Hydrogels for the Immobilization of Catalytically Active Enzymes and as Scaffolds for Cells (Link to thesis)
M. Sc. in Chemistry (2008-10)	**Indian Institute of Technology (IIT) Kanpur,** India. **M. Sc. Project Supervisor: Professor Parimal K. Bharadwaj**
B. Sc. in Chemistry (Honors, 2005-08)	**Presidency College** (Affiliated to **University of Calcutta**), India.

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Area of Research

My research interest lies at the interface of chemistry and biology to target cancer and infectious diseases like tuberculosis, malaria, Covid-19, etc., using nanomedicine and developing biodegradable 3D-printable hydro/microgels for type 1 diabetes and tissue engineering applications. Basically, my research is focused on the following fundamental and interdisciplinary projects where various macromolecular architectures ranging from linear, hyperbranched, dendronized linear, brush polymer, nano and microgels, etc., will be utilized for biomedical applications.

- Polymeric Microgels as Reservoir of Islet Cells for Sustain Release of Insulin
- Reactive Oxygen Species Responsive Amphiphilic Polymers for Drug Delivery
- Design and Development of Homogeneous Dendronized Polymeric Hydrogels for 3D bioprinting of Organoids

Research Projects

Title: **Synthesis, Self-assembly and Biological Applications of Glycerol Based Amphiphilic Polythiourethane**

Funding Agency: SERB, Status: Ongoing (09.2022-12. 2024). Total Cost: Rs. 32,97,165.

Patent

R. Satchi-Fainaro, S. Koshrovski-Michael, P. Dey, P-SELECTIN TARGETED NANOPARTICLES AND USES THEREOF, International Patent Application. International Application No. PCT/IL2024/050131. (Link)

Five Key Publications

1. R. K. Roy, T. Samanta, S. Saha, A. Ramesh, N. A. Begum, G. Ghosh and **P. Dey**[*]**,** Aromatic vs. Aliphatic Linkers: Impact on Dye Loading and Stability in Oligoglycerol-Derived Dendronized Polymersomes, ***Polymer Chemistry***, **2025**, *16*, 27-35. (Link). **(Impact Factor – 3.9, 2024)**
2. **P. Dey**, P. Rajdev, P. Pramanik, R. Haag, and S. Ghosh, Synthesis of Cylindrical Micelle from Hydrophilic Polymers Connected with a Single Supramolecular Structure-Directing Unit, ***Macromolecules***, **2020**, *53*(16), 7044-7052 (Link). **(Impact Factor – 5.2, 2024)**
3. **P. Dey**,[#] T. Bergmann,[#] J. L. Cuellar-Camacho, S. Ehrmann, M. S. Chowdhury, M. Zhang, R. Haag, W. Azab, Multivalent Flexible-Nanogels Exhibit Broad-Spectrum Antiviral Activity by Blocking Virus Entry, ***ACS Nano***, **2018**, *12*, 6429-6442 (Link). **(Impact Factor – 16, 2024)**
4. **P. Dey**,* S. Hemmati, and R. Haag,* Hydrolytically Degradable, Dendritic Polyglycerol Sulfate based Injectable Hydrogels using Strain Promoted Azide-Alkyne Cycloaddition Reaction, ***Polym. Chem.***, **2016**, *7*, 375 (Link). **(Impact Factor – 3.9, 2024)**
5. **P. Dey**, M. Adamovski, S. Friebe, A. Badalyan, R. Mutihac, F. Paulus, S. Leimkühler, U. Wollenberger, and R. Haag, Dendritic Polyglycerol−Poly(ethylene glycol)-Based Polymer Networks

for Biosensing Application, ***ACS Appl. Mater. Interfaces***, **2014**, *6*, 8937 (Link). **(Impact Factor – 8.2, 2024).**

[#] Equally contributed, * Corresponding authors

Academic Achievements & Recognitions

- Reipient of **Paired Early Career Fellowship in Applied Research (PECFAR award)** from IGSTC (Call 2025)
- Recipient of **Start-up research grant (SRG, 2022)** by SCIENCE & ENGINEERING RESEARCH BOARD (SERB)
- Life member of CRSI
- Recipient of National Post-Doctoral Fellowship (N-PDF), SERB (April 2017 – March 2019)
- Recipient of Dahlem Research School (DRS) Honors (Post Doc) Fellowship, Freie Universität Berlin from July 2016 – March 2017
- Recipient of prestigious BIG NSE scholarship (Berlin International Graduate School for Natural Sciences and Engineering) from the cluster of excellence UniCat (Technical University Berlin) for carrying out Ph. D at the universities in Berlin (October 2010 – September 2013)
- Qualified GATE 2009 (Graduate Aptitude Test in Engineering)
- Qualified CSIR-NET (Council of Scientific and Industrial Research–National Eligibility Test) (December 2009) examination and invited for SPM fellowship (Shyama Prasad Mukherjee Fellowship) interview
- Recipient of Merit-cum-Means (MCM) scholarship (2008-10) from Indian Institute of Technology (I.I.T.) Kanpur
- Qualified JAM 2008 (Joint Admission Test for M.Sc.) conducted by the Indian Institute of Technology (I.I.T.)
- Recipient of National Merit Scholarship (2003-2005) from West Bengal Board of Secondary Education

Research Expertise and Instrument Handling

- Expertise in polymer and organic synthesis specially on strain promoted azide-alkyne cycloaddition reactions (SPAAC), anionic polymerization of glycidols, ring opening polymerizations (ROP) of caprolactone and lactide monomers, Controlled radical polymerization
- Polymer/ hydrogel coatings on surfaces, Self-assembled monolayer (SAM) formation
- Contact angle measurements, Ellipsometer, Dynamic Light Scattering (DLS), Atomic force microscope (AFM), Differential Scanning Calorimetry (DSC) and Rheometer
- Cell culture, live-dead staining, Protein patterning, Fluorescence Microscopy
- 3D printing

Contributed/ Invited Presentations

- Symposium on Polymer Science (SPS 2023) organized by Indian Institute of Science Education and Research (IISER) Kolkata, West Bengal, India (17-18th November 2023), A Journey of

Polyglycerol Sulfates from Tissue Engineering to Virus Inhibition and Targeted Drug Delivery (Invited Lecture)

- 16th International Conference on "Polymer Science and Technology of Polymers and Advanced Materials through Innovation, Entrepreneurship, and Industry (SPSI MACRO-2022)" organized by CSIR-NCL, IISER-P and SPPU in Pune, India, (2nd – 4th November 2022) on "Co-delivery of BRAF and MEK Inhibitors using P-selectin-targeted PLGA-PEG Nanoparticles for the Treatment of Melanoma" (Flash Poster Presentation)
- APSRT 2019 on "Advances in Polymer Science & Rubber Technology; Vision 2030" organized by Rubber Technology Center, Indian Institute of Technology Kharagpur, India (24-27th September, 2019), Entropy Driven Precision Assembly of Engineered Amphiphilic Macromolecules and their Uptake in Cancer Cells; **P. Dey** and S. Ghosh
- Indo-German Workshop on "Multivalent Architectures for Biomedical Applications" organized by Department of Chemistry, University of Delhi, Delhi, India (5-6th April 2019), Entropy Driven Precision Assembly of Engineered Amphiphilic Macromolecules; **P. Dey**, P. Rajdev, P. Pramanik, and S. Ghosh
- 15th International Conference on Polymer Science and Technology 2018 (SPSI MACRO-2008), Pune, India (19-22 December), Dendritic Polyglycerol based Polyanionic Hydro-and Nanogels for Biomedical Applications; **P. Dey**, and R. Haag
- International Dendrimer Symposium 2015 (IDS-9), Montreal, Canada (12-17 July), Dendritic Polyglycerolsulfate (dPGS) based Injectable Hydrogels for Cartilage Tissue Engineering; **P. Dey**, T. Schneider, L. Chiappisi, M. Gradzielski, G. Schulze-Tanzil, and R. Haag
- European Polymer Federation (EPF) 2015, Dresden, Germany (21-26 June), Heparin mimetic dendritic polyglycerol sulfate based injectable hydrogels for cartilage tissue engineering; **P. Dey**, T. Schneider, L. Chiappisi, M. Gradzielski, G. Schulze-Tanzil, and R. Haag
- Euro BioMAT 2015: European symposium and exhibition on biomaterials and related areas, Weimar, Germany (21-22 April), Heparin mimetic dendritic polyglycerol sulfate based injectable hydrogels for cartilage tissue engineering; **P. Dey**, T. Schneider, L. Chiappisi, M. Gradzielski, G. Schulze-Tanzil, and R. Haag

Research Guidance

Number of Ph.D. Students: 4 (Ongoing)

- **Mr. Supriyo Saha,** Since October 2024 (UGC NET-SRF)
- **Ms. Susmita Biswas**, Since September 2024 (Savitribai Jyotirao Phule Fellowship, UGC-SRF)
- **Mr. Raj Kumar Roy**, Since September 2024 (UGC NET-SRF)
- **Mr. Sipradip Mahapatra**, Since December 2023 (University Fellowship, Non NET)

Number of M.Sc. Project Students: 3 (Ongoing), 4 (Completed)

Details of M.Sc project students:

- **Mr. Aaranyak Bordoloi, (2024-25)**
- **Mr. Chinmoy Saha, (2024-25)**
- **Mr. Saswata Mondal, (2024-25)**

- **Ms. Jayanti Pramanik**, Title: **A Review on Photoredox Catalysis in Water Using Amphiphilic Molecules (2023-24)**
- Ms. Sumitra Murmu, Title: **A Review on Bioorthogonal Nanocatalysts for Intracellular Generation of Anticancer Therapeutics (2023-24)**
- Mr. Sondip Deka, Title: **A Detailed Review on Vitrimerisation and its use in Plastic Recycling (2022-23)**
- Mr. Biswanath Patra, Title: **A Detailed Review on Synthesis, and Applications of Oligoglycerol Dendrons (2022-23).**

Summer internship:

- Ms. Paramita Sinha (Pursuing B. Sc at Presidency University, Kolkata, June 2025 – August 2025, Under NEP)
- Ms. RESHMI SAMANTA (Pursuing M. Sc at NIT Durgapur, May 2025 – July 2025)
- DEBDATTA GUPTA (Int. M.Sc student, Int. Science, Visva-Bharati)

Reviewer for Peer Reviewed Journals

- *Advanced Materials*
- *Advanced Functional Materials*
- *Advanced Healthcare Materials*
- *ACS Applied Materials & Interfaces*
- *Biomacromolecules*
- *RSC Advances*
- *Chemistry Select*
- *Journal of Macromolecular Science, Part A: Pure and Applied Chemistry*
- *Adv. Healthcare Mater*
- *ACS Applied Mater Interfaces*
- *ACS Applied Polymer Materials*
- *Advanced Material Interfaces*
- *Macromolecular Bioscience*
- *Scientific Reports*
- *ACS Polymer Science & Technology*
- *Macromolecular Rapid Communications*
- *Langmuir*
- *Soft Matter*
- *Chemical Society Reviews*

Research Experience

Post-Doctoral Research

Tel Aviv University **01/2020-05/2021**

Department of Physiology and Pharmacology, Sackler Faculty of Medicine, Tel-Aviv, Israel.

Advisor: Prof. Ronit Satchi-Fainaro

- Developed in vitro brain tumor models studied in gelatin based dynamic shear thinning hydrogels

- Developed PLGA based nanoparticles for targeting P-selectin studied in melanoma tumor model

It resulted in a few co-authored publications in ***Science Advances*** (2024), ***Theranostics*** (2022), and ***Advanced Drug Delivery Reviews*** (2021).

Indian Association for the Cultivation of Sciences (IACS) **04/2017 – 12/2019**

School of Applied and Interdisciplinary Sciences, India.
Advisor: Prof. Suhrit Ghosh
I have worked on the development amphiphilic polymers based on water soluble monomers such as oligoglycerol dendrons for the generation of controlled supramolecular functional architectures in different shapes ranging from cylindrical micelles to polymersomes by the synergistic operation of H-bonding and π-stacking interaction and the intra and intermolecular H-bond mediated folding of polyurethanes. Following are the key achievements in the studies.

- The micellization of supramolecularly engineered amphiphilic macromolecules (SEAMs) is mainly governed by entropy. The mechanism of spherical to cylindrical micelles transformation (studied in SEAMs) was unfolded and these transformations could be speeded up by the addition of a good solvent for the hydrophobic block like THF.
- The cellular uptake behavior of these aggregates like polymersome, spherical micelles and cylindrical micelles obtained from this SEAMs were different (Cellular internalization rate = Polymerosme> Spherical Micelle >> Cylindrical Micelle). Here all the structures were obtained just varying the one H-bonding unit keeping the overall hydrophobic and hydrophilic content constant.

It resulted in a few shared first and co-authored publications in various reputed journals like ***Macromolecules*** (2020, 2018), ***Chemistry-An Asian Journal*** (2019), ***ACS Macro Letters*** (2021), ***ACS Applied Polymer Materials*** (2022), ***ACS Applied Materials & Interfaces*** (2023) and two reviews on disulfide-based nanostructures for drug delivery applications (***Soft Matter***, 2020) and controlled seeded supramolecular polymerization (***Chem. Commun.***, 2020) as shared first author and one coauthor paper in ***Accounts of Chemical Research*** (2021) on supramolecularly engineered amphiphilic (macro)molecules and proteins. Part of the project was funded by the SERB national post-doctoral fellowship.

Freie Universität Berlin **11/2015 - 03/2017**

Institute for Chemistry and Biochemistry, Berlin, Germany.
Advisor: Prof. Rainer Haag
I developed the hyperbranched polyglycerol based polymeric hydrogel particles on a controlled dimension (termed as “nanogel” and “microgel” when the dimension is in the nm and μm range, respectively) using different techniques such as nanoprecipitation, miniemulsion, and microfluidic templating.

- Developed sulfated flexible and rigid nanogels (NGs) based on dendrtitic polyglycerol sulfate (dPGS) in the size range of 100−200 nm to match the virus size using inverse nanoprecipitation technique by using two different types of spacers, i.e., dendritic and linear polyglycerols. The flexible NGs can adapt to the virus surface during the binding process, which lead to higher valent interactions and hence reduced the probability of detachment from the viral surface. As a

consequence, the effective concentrations (EC) with 50% inhibition of HSV-1 were found to be 90 and 164 μg/mL for flexible and rigid NGs, respectively studied in collaboration.

- Sulfated NGs were more uptaken by HUVEC and HeLa cells compared to the polyglycerol NGs (with hydroxyl groups). In collaboration hydroxylated NGs were tested in a tuberculosis model which showed that the NGs were mainly accumulated in the granuloma areas significantly more than in uninfected areas of Zebrafishes.

It resulted in a shared first-author paper and one co-authored paper, which were published in ***ACS Nano*** (2018). In addition, a few co-authored papers were published based on the work at FU Berlin in various reputed journals like ***Nature Communications*** (2019), ***Nano-Micro Letters*** (2021), ***ACS Nano*** (2018), ***ACS Applied Materials & Interfaces*** (2018), ***Biomacromolecules*** (2019 and 2018), ***Journal of Materials Chemistry B*** (2019), ***Advanced Materials Interfaces*** (2018)*, etc.* The project was funded by DRS honors post-doctoral fellowship.

Ph. D. Student: Freie Universität Berlin **01/2011 – 10/2015**

Institute for Chemistry and Biochemistry, Berlin, Germany.

Advisor: Prof. Rainer Haag

I investigated new ways for the formation of polyglycerol-based hydrogels using different biorthogonal crosslinking chemistry such as Cu-free strain promoted azide-alkyne cycloaddition (SPAAC) reactions.

- Enzyme based biosensors were developed for the amperometric detection of benzaldehyde (concentration range 0.8-400 μM) where Periplasmatic aldehyde oxidoreductase (PaoABC) was entrapped in a dendritic polyglycerol-polyethylene glycol (dPG-PEG) based hydrogel film on the gold electrode. The biosensors performance was optimized by varying all the parameters like enzyme loading, pH, crosslinking density, and crosslinker lengths.
- Polyanionic hydrogels with different amount of dPGS content were developed to mimic the chondrocyte microenvironment using biorthogonal SPAAC reaction. Variation of dPGS content led to variation of the elastic moduli of the hydrogels in the range from 1-5 kPa. The efficiency of dPGS based hydrogels was evaluated as a cartilage tissue engineering scaffolds in collaboration by encapsulating the human chondrocytes during gelation. dPGS incorporated hydrogels had the highest cell viability after 21 days compared to the other controls (like pure PEG hydrogels, alginate hydrogels).
- A strained cyclooctyne terminated PEG-polycaprolactone linker was synthesized to introduce degradability in the dPGS hydrogels and cyclooctyne groups were introduced by employing a protection-deprotection strategy of strained cyclooctynes. Degradation study has shown that the dPGS containing hydrogels degraded at a slower rate compared to the PEG hydrogels in vitro.

I served as the first or shared first authors in all of these studies and published in ***ACS Applied Materials and Interfaces*** (2014), ***Macromolecular Bioscience*** (2016) and ***Polymer Chemistry*** (2016), respectively. In the last project, I was co-corresponding author as well and my Ph. D. fellowship was funded through BIGNSE fellowship.

09/2014-10/2014: Visiting project student during Ph.D., Montréal Neurological Institute and Hospital, McGill University, Canada.

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Teaching Experience

Visva-Bharati (July 2021- current):

Four Year Undergraduate Programme (Major in Chemistry, Under NEP 2020):

Sem III: SEC (Topics: Pharmaceutical Chemistry, Practical)

Sem IV: MJCH08 (Organic Chemistry, Theory), Unit 3: Carboxylic Acids and their Derivatives

MJCH10 (Gr. B: Organic Chemistry Practical)

Sem V: MJCH12 Unit 3: Pericyclic Reactions

B. Sc (SEM I and III, Under NEP 2020, Multidisciplinary course in Chemistry)

B.Sc. (Chemistry Honors, CBCS)

Sem III: CC-6 Organic Chemistry (Topics: Carboxylic Acids and their Derivatives, Nitrogen, and ulphur containing compounds)

Sem IV: CC-9, GROUP-B Practical (Organic Preparation)

Sem V: CC-11 Organic Chemistry (Topics: Polymers)

Sem VI: DSE 7 Polymer Chemistry

Int. M. Sc (5 year)

Sem I: Paper CH-1-1-1 (Topic: Structure & Reactivity and Stereochemistry of Carbon Compounds)

Sem-II: Paper CH-1-2-1 (Topic: Organic Reaction Mechanisms, General)

Sem V: Paper CH-3-5-1 (Topic: Reaction Mechanism: Substitution and Free-radical Reactions)

Sem- VI (Int. M. Sc): Paper CH-3-6-2 (Topic: Heterocyclic Chemistry, Chemistry Major)

M.Sc (2-year Chemistry)

Sem-I: MCH14-O Organic Chemistry (Core) (Topics: Heterocyclic Chemistry of Fused Ring System)

Sem II: MCH22-O Organic Chemistry (Topic: Natural Products with Special Reference to Biosynthesis)

Sem-III: **MCH34-O: Optional (Organic)** (Topic: Protection and Deprotection) and **MCH36-OP: Optional (Organic) Practical**

Sem IV: MCH42-O Optional Organic (Topic: Cycloaddition reactions); **MCH44-O Optional Organic** (Topic: Natural Products, Biosynthesis)

Indian Association for the Cultivation of Sciences (IACS)

- M. Sc Practical course on Polymer Synthesis, WS 2019-20.

Freie Universität Berlin

- Physical Organic Chemistry (Summer Semester 2012) taught by Prof. Christoph A. Schalley
- Advanced Synthetic Organic Chemistry Practical Course (Winter Semester 2012-13, 2013-14; Summer Semester 2012, 2013)

List of Publications

32. S. Biswas, **P. Dey,*** and G. Ghosh,* Polymeric Microgels: Synthesis, and Emerging Applications, *J. Macromol. Sci., Part A: Pure Appl. Chem.,* **2025***, 62,* 295-316. **(Impact Factor – 2.1, 2023)**. *ISSN no. 1520-5738.*
31. A. Sahu, S. Mahapatra, **P. Dey,*** and G. Ghosh,* Harnessing Crystallization-Driven Self-Assembly (CDSA) of Semicrystalline Block Copolymers for Functional 2D Architectures and Their Applications, *Macromol. Chem. Phys.,* **2025,** *226,* 2400426. **DOI:** 10.1002/macp.202400426. **(Impact Factor – 2.7, 2024)**
30. S. Saha, A. Ramesh, T. Samanta, R. K. Roy, N. A. Begum, G. Ghosh and **P. Dey,*** Enhanced Dye Loading and Stability in ABA-Type Amphiphilic Polymers via Modification of Polythiourethane Backbone with Pendant Aromatic Groups, *Macromol. Chem. Phys.,* **2025**, *226,* 2400385. **(Impact Factor – 2.5, 2023)** https://doi.org/10.1002/macp.202400385.
29. R. K. Roy, T. Samanta, S. Saha, A. Ramesh, N. A. Begum, G. Ghosh and **P. Dey*,** Aromatic vs. Aliphatic Linkers: Impact on Dye Loading and Stability in Oligoglycerol-Derived Dendronized Polymersomes, ***Polymer Chemistry***, **2025**, *16*, 27-35. **(Impact Factor – 3.9, 2024)**, ISSN no. 1759-9962.
28. S. Mahapatra, **P. Dey**,* and G. Ghosh,* Controlled Synthesis of Cylindrical Micelles via Crystallization Driven Self-assembly (CDSA) and Applications, ***Polymer Journal***, **2024**, *56, 949–975*. (*Invited Review Article). (***Impact Factor 2.3, 2023***),* eISSN - 1349-0540.
27. S. Koshrovski-Michael, D. Rodriguez Ajamil, **P. Dey,** R. Satchi-Fainaro *et. al.,* Two-in-One Nanoparticle Platform Enhances the Therapeutic Index of Targeted Therapies in P-selectin-expressing Cancers, ***Science Advances***, **2024**, *10, eadr4762*. *(***Impact Factor 12.5, 2024***),* ISSN - 2375-2548.
26. R. Barman, R. Bej, **P. Dey**, and S. Ghosh, Cisplatin-Conjugated Polyurethane Capsule for Dual Drug Delivery to Cancer Cell, *ACS Applied Mater. Interfaces*, **2023,** *15***,** 25193–25200*.* ***(Impact Factor – 8.2, 2024),*** *ISSN no - 1944-8244.*
25. Y. Epshtein, R. Blau, E. Pisarevsky, S. Koshrovski-Michael, D. Ben-Shushan, S. Pozzi, G. Shenbach-Koltin, L. Fridrich, M. Buzhor, A. Krivitsky, **P. Dey**, and R. Satchi-Fainaro, Polyglutamate-based nanoconjugates for image-guided surgery and post-operative melanoma metastases prevention, *Theranostics,* **2022**, *12*, 6339-6362. **(Impact Factor – 13.3, 2024),** ISSN: 1838-7640.
24. R. Barman, P. Rajdev, T. Mondal, **P. Dey**, and S. Ghosh, Amphiphilic Alternating Copolymers with Adjustable Lower Critical Solution Temperature (LCST) and Correlation with Non-specific Protein Adsorption, *ACS Applied Polymer Materials*, **2022**, *4*, 5261−5268. doi/10.1021/acsapm.2c00938. **(Impact Factor – 4.7, 2024),** ISSN 2637-6105.
23. P. Rajdev, **P. Dey,**[#] I. Ghosh,[#] R. Khamrui, J. Kar, S. S. Jana, and S. Ghosh, Shape-Dependent Cellular Uptake of Nanostructures Produced from Supramolecular Structure-Directing Unit-Appended Hydrophilic Polymers, *ACS Macro Letters*, **2021**, *10*, 1467–1473. *Doi/pdf/10.1021/acsmacrolett.1c00588.* **(Impact Factor – 5.2, 2024),** ISSN: 2161-1653.
22. S. Chowdhury, X. Zhang, L. Amini, **P. Dey**, A. K. Singh, A. Faghani, M. S. Henneresse, R. Haag, Functional Surfactants for Molecular Fishing, Capsule Creation, and Single-Cell Gene

Expression, *Nano-Micro Lett.,* **2021,** *13 (1),* 1-9. ***Doi****.org/10.1007/s40820-021-00663-x.* **(Impact Factor – 36.3, 2024),** ISSN no - 2150-5551.

21. A. Sikder, S. Chakraborty, P. Rajdev, **P. Dey**, and S. Ghosh, Molecular Recognition Driven Bioinspired Directional Supramolecular Assembly of Amphiphilic (Macro)molecules and Proteins, *Acc. Chem. Res.* **2021**, *54* (11), 2670-2682. ***Doi****.org/10.1021/acs.accounts.1c00195.* (**Impact Factor – 17.7, 2024**), ISSN: 0001-4842.
20. S. Pozzi, A. Scomparin, S. Israeli-Dangoor, D. Rodriguez, P. Ofek, L. Neufeld, A. Krivitsky, D. Vaskovich, R. Kleiner, **P. Dey**, S. Koshrovski, N. Reisman, R. Satchi-Fainaro, Meet me halfway: Are in vitro 3D cancer models on the way to replace in vivo models for nanomedicine development? *Adv. Drug Deliv. Rev.,* **2021***, 175,* 113760*.* ***Doi****.org/10.1016/j.addr.2021.04.001.* (**Impact Factor – 17.6, 2024**), ISSN no - 0169-409X.
19. **P. Dey**, P. Rajdev, P. Pramanik, R. Haag and S. Ghosh, Synthesis of Cylindrical Micelle from from Hydrophilic Polymers Connected with a Single Supramolecular Structure-Directing Unit, *Macromolecules*, **2020**, *53(16),*7044-7052. ***Doi.****org/10.1021/acs.macromol.0c01493*. **(Impact Factor – 5.2, 2024)**, ISSN no. 1520-5835.
18. G. Ghosh,[#] **P. Dey**,[#] S. Ghosh, Controlled Supramolecular Polymerization of π-Systems, *Chem. Commun.,* **2020***, 56,* 6757-6769. ***Doi****.org/10.1039/D0CC02787A. (Feature Article),* **(Impact Factor – 4.2, 2024)**. *ISSN: 1359-7345 (print)*
17. R. Bej,[#] **P. Dey**[#] and S. Ghosh, Disulfide Chemistry in Responsive Aggregation of Amphiphilic Systems, *Soft Matter*, **2020**, *16,* 11-26. ***DOI:*** *10.1039/C9SM01960J.* (*Invited review*), **(Impact Factor – 2.8, 2024),** ISSN no - 1744-683X.
16. R. Barman,[#] **P. Dey,** [#] T. Mondal, S. Ghosh, Synthesis and Self-assembly of Helical Polymer Grafted from a Foldable Polyurethane Scaffold, *Chemistry - An Asian Journal*, **2019**, *14*, 4741-4747. ***DOI:*** *10.1002/asia.201901119*. (**Impact factor: 3.3, 2024**) ISSN no. 1861-471X.
15. M. S. Chowdhury, W. Zheng, S. Kumari, J. Heyman, X. Zhang, **P. Dey**, D. A. Weitz, R. Haag, Dendronized fluorosurfactant for highly stable water-in-fluorinated oil emulsions with minimal inter-droplet transfer of small molecules, *Nat. Commun.*, **2019**, *10,* 1. **DOI:** 10.1038/s41467-019-12462-5. (**Impact factor: 15.7, 2024**) ISSN No. 2041-1723.
14. R. Randriantsilefisoa, J. L. Cuellar-Camacho, M. S. Chowdhury, **P. Dey**, U. Schedler, R. Haag, Highly Sensitive Detection of Antibodies in a Soft Bioactive Three-Dimensional Bioorthogonal Hydrogel, *J. Mater Chem. B.*, **2019**, *7*, 3220-3231. ***DOI:*** *10.1039/C9TB00234K*. (**Impact Factor – 5.7, 2024**), ISSN 2050-7518.
13. S. Kumari, K. Achazi, **P. Dey**, R. Haag, J. Dernedde, Design and Synthesis of PEG-Oligoglycerol Sulfates as Multivalent Inhibitors for the Scavenger Receptor LOX-1, *Biomacromolecules*, **2019**, *20*, 1157. ***Doi****.org/10.1021/acs.biomac.8b01416*. (**Impact Factor – 5.4, 2024**), ISSN no. 1525-7797.
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