

CURRICULUM-VITAE

Full Name: Dr. Pradip Dey (IRINS profile ID: 216953)

Designation: Assistant Professor

Contact Address: Department of Chemistry, Siksha Bhavana,
Visva-Bharati, Santiniketan,
West Bengal, India-731235.

Email: pradip.dey@visva-bharati.ac.in; pradipdey.chem@gmail.com



Work Experience

Tenure	Position Held/Holding
07/2021 - Present	Assistant Professor, Department of Chemistry, Siksha Bhavana, Visva-Bharati, 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.

CURRICULUM-VITAE

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 (09.2022-09.2024).

Five Key Publications

1. 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 ([Link](#)).
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](#)).
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](#)).
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](#)).
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](#)).

Equally contributed, * Corresponding authors

CURRICULUM-VITAE

Academic Achievements & Recognitions

- 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

- 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

CURRICULUM-VITAE

- 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

Reviewer for Peer Reviewed Journals

- *Biomacromolecules*
- *RSC Advances*
- *Journal of Macromolecular Science, Part A: Pure and Applied Chemistry*

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

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 =

CURRICULUM-VITAE

Polymerosome > 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 three first or shared first author publications (*Macromolecules, Chemistry-An Asian Journal*) and two reviews on disulfide-based nanostructures for drug delivery applications (*Soft Matter* 2020) and controlled seeded supramolecular polymerization (*Chem. Commun.* 2020). The part of the project was funded by 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 dendritic 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 $\mu\text{g}/\text{mL}$ 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 a shared first author paper and one coauthored paper and both the papers were published in *ACS Nano* (2018). 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

CURRICULUM-VITAE

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.

Teaching Experience

Visva-Bharat (July 2021- current):

B.Sc. (Chemistry Honors)

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

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

Sem VI: DSE 7 Polymer Chemistry

Int. M.Sc (5 year)

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

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: MCH44-O Optional Organic (Topic: Natural Products, Biosynthesis)

Ph.D:

Unit 6 - Biosynthesis of Natural Products and Biochemistry

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

CURRICULUM-VITAE

- Advanced Synthetic Organic Chemistry Practical Course (Winter Semester 2012-13, 2013-14; Summer Semester 2012, 2013)

Mentorship

- M. Sc. Thesis Guidance: Md. Suman Chowdhury, Thesis Title: pH Cleavable Microgels for Controlled Release, Freie Universität Berlin, Germany.
- M. Sc. Summer Project Student (Indian academy of Sciences): Sambit Kumar Panda (Sambalpur University, Odisha), Project Title: Synthesis and Characterization of Reactive Oxygen Species-sensitive Amphiphilic Polyurethane, IACS Kolkata, India.
- M. Sc Project Student: Basudeb Naskar (Bidhannagar Govt. College, West Bengal), Project Title: Spectroscopic characterization of nonionic water-soluble polyurethane, IACS Kolkata, India.

List of Publications

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 – 11.600**), 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 – 4.855, 2021**), 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 – 7.015, 2020**), 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 – 23.655, 2021**), 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**, Doi.org/10.1021/acs.accounts.1c00195. (**Impact Factor – 24.466, 2021**), ISSN: 0001-4842.

CURRICULUM-VITAE

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**, [Doi.org/10.1016/j.addr.2021.04.001](https://doi.org/10.1016/j.addr.2021.04.001). (**Impact Factor – 17.873, 2021**), 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](https://doi.org/10.1021/acs.macromol.0c01493). (**Impact Factor – 6.057, 2021**), 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](https://doi.org/10.1039/D0CC02787A). (*Feature Article*), (**Impact Factor – 6.065, 2021**).
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](https://doi.org/10.1039/C9SM01960J). (*Invited review*), (**Impact Factor – 4.046, 2021**), 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](https://doi.org/10.1002/asia.201901119). (**Impact factor: 4.839, 2021**) 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](https://doi.org/10.1038/s41467-019-12462-5). (**Impact factor: 17.694, 2021**) 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](https://doi.org/10.1039/C9TB00234K). (**Impact Factor – 7.571, 2021**), ISSN 2050-7518.
13. S. Kumari, K. Achazi, **P. Dey**, R. Haag, J. Dervede, 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](https://doi.org/10.1021/acs.biomac.8b01416). (**Impact Factor – 6.978, 2021**), ISSN no. 1525-7797.
12. S. Hemmati-Sadeghi, **P. Dey**, J. Ringe, R. Haag, M. Sittinger, and T. Dehne, Biomimetic sulfated PEG-hydrogel inhibits proteoglycan loss and TNF-induced expression pattern in an osteoarthritis in

CURRICULUM-VITAE

- vitro model, *J. Biomed. Mater. Res., Part B*, **2019**, *107*, 490. **DOI:** 10.1002/jbm.b.34139. (**Impact Factor – 3.404, 2021**), ISSN no. 1552-4981.
11. **P. Dey**,[#] P. Rajdev,[#] P. Pramanik,[#] and S. Ghosh, Specific Supramolecular Interaction Regulated Entropically Favorable Assembly of Amphiphilic Macromolecules, *Macromolecules*, **2018**, *51*, 5182-5190. **DOI:** 10.1021/acs.macromol.8b01025. (**Impact Factor – 6.057, 2021**), ISSN no. 1520-5835.
 10. **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. # - equally contributed. **DOI:** 10.1021/acsnano.8b01616. (**Impact Factor – 18.027, 2021**), ISSN no - 1936-0851.
 9. F. Fenaroli, U. Repnik, Y. Xu, K. Schmidt, S. Van Herck, **P. Dey**, D. Frei, F. Miltzov Skjeldal, S. Bagheri Fam, A. Kocere, R. Haag, B. De Geest, M. Barz, D. Russell and G. Griffiths, Enhanced Permeability and Retention-Like Extravasation of Nanoparticles from the Vasculature into Tuberculosis Granulomas in Zebrafish and Mouse Models, *ACS Nano*, **2018**, *12*, 8646. **DOI:** 10.1021/acsnano.8b04433. (**Impact Factor – 18.027, 2021**), ISSN no - 1936-0851.
 8. Q. Ran, X. Xu, **P. Dey**, J. Dzubiella, M. Ballauff, R. Haag, Interaction of human serum albumin with dendritic polyglycerol sulfate: Rationalizing the thermodynamics of binding, *J. Chem. Phys.*, **2018**, *149*, 163324. **DOI:** 10.1063/1.5030601. (**Impact Factor – 4.304, 2021**), ISSN no. 1089-7690.
 7. A. L. Herrmann, L. Kaufmann, **P. Dey**, R. Haag, U. Schedler, Bioorthogonal in situ Hydrogels based on Polyether-Polyols for new Biosensor Materials with high Sensitivity, *ACS Applied Mater. Interfaces*, **2018**, *10*, 11382. **DOI:** 10.1021/acсами.8b01860. (**Impact Factor – 10.383, 2021**), ISSN no - 1944-8244.
 6. X. Xu, Q. Ran, **P. Dey**, R. Nikam, R. Haag, M. Ballauff, and J. Dzubiella, Counterion-release entropy governs the inhibition of serum proteins by polyelectrolyte drugs, *Biomacromolecules*, **2018**, *19*, 409. **DOI:** 10.1021/acs.biomac.7b01499. (**Impact Factor – 6.978, 2021**), ISSN no. 1525-7797.
 5. C. Schlaich, Y. Fan, **P. Dey**, J. Cui, Q. Wei, R. Haag, and X. Deng, Universal, Surfactant-Free Preparation of Hydrogel Beads on Superamphiphobic and Slippery Surfaces, *Adv. Mater. Interfaces*, **2018**, *5*, 1701536. **DOI:** 10.1002/admi.201701536. (**Impact Factor – 6.389, 2021**), ISSN no. 2196-7350.
 4. B. V. Lospichl, S. Hemmati-Sadeghi, **P. Dey**, T. Dehne, R. Haag, M. Sittinger, J. Ringe, M. Gradzielski, Injectable Hydrogels for Treatment of Osteoarthritis – A rheological study, *Colloids and Surfaces B: Biointerfaces*, **2017**, *159*, 477. **DOI:** 10.1016/j.colsurfb.2017.07.073. (**Impact Factor – 5.999, 2021**), ISSN no. 0927-7765.

CURRICULUM-VITAE

3. **P. Dey**,* S. Hemmati, and Rainer Haag,* Hydrolytically Degradable, Dendritic Polyglycerol Sulfate based Injectable Hydrogels using Strain Promoted Azide-Alkyne Cycloaddition Reaction, *Polym. Chem.*, **2016**, 7, 375. **DOI:** 10.1039/c5py01326g. (**Impact Factor – 5.364, 2021**), ISSN no. 1759-9962.
2. **P. Dey**,# T. Schneider,# L. Chiappisi, M. Gradzielski, G. Schulze-Tanzil, and R. Haag, Mimicking of Chondrocyte Microenvironment using In Situ Forming Dendritic Polyglycerol Based Synthetic Polyanionic Hydrogels, *Macromol. Biosci.*, **2016**, 16, 580. **DOI:** 10.1002/mabi.201500377. (**Impact Factor – 5.859, 2021**), ISSN no. 1616-5195.
1. **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. **DOI:** 10.1021/am502018x. (**Impact Factor – 10.383, 2021**), ISSN no - 1944-8244.

indicates equal first/second authors, * indicates Corresponding authors.
