Name: Dr. Jijo V. J.
Designation and Department: Assistant Professor, Department of Chemistry
Date of Joining: 01-12-2020
Contact info: Vallooran House, Kanjoor P.O., Ernakulam, 683575
Phone: 9746898080
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Teaching Experience in years: 1 year at Univ. of Copenhagen
Details of Promotions: Nil

Academic Credentials

PhD in Materials Science and Engineering (awarded in August 2014)
Swiss Federal Institute of Technology, Zurich (ETH)
Thesis topic: Stimuli-responsive liquid crystals for controlled drug-diffusion and biosensor applications.

MTech. in Polymer Technology (2006-2008)
Department of Polymer Science and Rubber Technology, Cochin University of Science and Technology, Kerala.

MSc. in Chemistry (2003-2005)
Department of Chemistry, Sacred Heart College, Thevara, Kerala, India

BSc. in Chemistry (2000-2003)
Department of Chemistry, Sacred Heart College, Thevara, Kerala, India

Scopus ID or Any Other Research ID:
https://scholar.google.com/citations?hl=en&user=4sulvNMAAAAJ&view_op=list_works&gmla=AJsN-F5A8_MKgq47S0G95XSWL-1hVLOMWoVFnov0Pc7ZncAqegesNgvQimECGK4-LgdBi2Nd-1gsNlMnDJi-m5ByjJSExoT4ZTbKRe2ACDVN88pOLN5LD4qFML3YFJDTFfbajaAHz3eq53b2Ihp3ntvcBYKeTvGsL5G8gJvX6zdBIKh5Z7gzoBE

Areas of Interest:
Physical Chemistry, Soft Matter, Scattering, Self-assembly, Lipids, Drug-delivery Materials

Institutional Responsibilities: Innovation Council

Subjects Taught:

a. Research Projects

Title	Details	Amount	Nature	Status
Liquid Crystal Biosensors – Lyotropic Liquid Crystal for Rapid Cost-effective Detection of Infectious Diseases	2016-2017 Swiss Grant: Gebert Rüf Stiftung, Basel	2,00,000 CHF	Prototype Development	Completed
Liquid crystal cubic phase biosensors for the rapid and facile detection of pathogenic microorganisms	2015-2016 Innovation and Entreprenuership Lab, ETH Zurich	1,50,000 CHF	Proof of Concept	Completed

b. Research Papers in International Journals

Year	Title	Name of the Journal	Volume/Issue/doi unmber	Remarks (CARE list number or Scopus Number)
2020	*Stereochemical Purity Can Induce a New Crystalline Mesophase in Phytantriol Lipids*	**Langmuir**	36, 9132	**ISSN: 1520-5827** https://www.scopus.com/sourceid/26987
2019	*Soft biomimetic nanoconfinement promotes amorphous water over ice.*	**Nature Nanotechnology**	14, 609	**ISSN: 1748-3395** https://www.scopus.com/sourceid/5200152704
2019	*Spatiotemporal control of enzyme induced crystallization under lyotropic liquid crystals nanoconfinement.*	**Angewandte Chemie International Edition (Wiley)**	58, *7289*	**ISSN:1433-7851** https://www.scopus.com/sourceid/22687
2019	*Supramolecular chirality and crystallization using biocatalytic self-assembly in lipidic cubic phase.*	**Nanoscale**	11, 5891	**ISSN:2040-3364** https://www.scopus.com/sourceid/19700173215

2019	*Palladium nanoparticles synthesized, templated and supported by lipidic mesophases as efficient catalysts of Suzuki-Miyaura cross coupling reactions.*	**Langmuir**	35, 120	**ISSN: 1520-5827** https://www.scopus.com/sourceid/26987
2018	*Efficient asymmetric synthesis of carbohydrates by Aldolase nano-confined in lipidic cubic mesophases.*	**ACS Catalysis**	8, 5810	**ISSN: 21555435** https://www.scopus.com/sourceid/19700188320
2016	*Lipidic cubic phases as a versatile platform for the rapid detection of biomarkers, viruses, bacteria and parasites.*	**Advanced Functional Materials**	26, 181	**ISSN:1616-301X** https://www.scopus.com/sourceid/25143
2016	*Responsive self-assembled lipid systems for drug delivery and diagnostics.*	**Journal of Colloids & Interface Science**	484, 320	**ISSN:0021-9797** https://www.scopus.com/sourceid/26950
2016	*Lyotropic Liquid Crystalline Cubic Phases as Versatile Host Matrices for Membrane-Bound Enzymes.*	**Journal of Physical Chemistry Letters**	7, 1507	**E-ISSN:1948-7185** https://www.scopus.com/sourceid/19600166212
2015	*Oil and drug control the release rate from lyotropic liquid crystals.*	**Journal of Controlled Drug Release**	204, 78	**ISSN: 0168-3659** https://www.scopus.com/sourceid/23010
2014	*Enzyme kinetics in liquid crystalline mesophases: size matters but also topology.*	**Langmuir**	31, 4558	**ISSN: 1520-5827** https://www.scopus.com/sourceid/26987
2014	*Controlling enzymatic activity and kinetics in swollen mesophases by physical nano-confinement.*	**Nanoscale**	6, 6853	**ISSN:2040-3364** https://www.scopus.com/sourceid/19700173215
2013	*Controlling anisotropic drug diffusion in lipid-Fe_3O_4 nanoparticle hybrid mesophases by magnetic alignment.*	**Langmuir**	29, 999	**ISSN: 1520-5827** https://www.scopus.com/sourceid/26987

2013	*Magnetic-responsive hybrids of Fe_3O_4 nanoparticles with β-Lactoglobulin amyloid fibrils and nanoclusters.*	**ACS nano**	6146-6155	**ISSN: 1936-0851** https://www.scopus.com/sourceid/11500153511
2012	*Twofold light and magnetic responsive behavior in nanoparticle-lyotropic liquid crystal systems.*	**Langmuir**	28, 5589	**ISSN: 1520-5827** https://www.scopus.com/sourceid/26987
2011	*Macroscopic alignment of lyotropic liquid crystals using magnetic nanoparticles*	**Advanced Materials**	23, 3932	**ISSN: 0935-9648** https://www.scopus.com/sourceid/25143
2011	*Phase behavior of Lipid-based lyotropic liquid crystal in presence of colloidal nanoparticles*	**Langmuir**	27, 9792	**ISSN: 1520-5827** https://www.scopus.com/sourceid/26987
2011	*Templating effects of lyotropic liquid crystals in the encapsulation of amyloid fibrils and their stimuli-responsive magnetic behavior*.	**Soft Matter**	7, 3348	**ISSN: 1744-683X** https://www.scopus.com/sourceid/145691
2011	*Amyloid-mediated synthesis of giant, fluorescent, gold single crystals and their hybrid sandwiched composites driven by liquid crystalline interactions.*	**Journal of Colloids & Interface Science**	361, 90	**ISSN:0021-9797** https://www.scopus.com/sourceid/26950
2010	*Volume transition of PNIPAM in a nonionic surfactant hexagonal mesophase*	**Macromolecules**	43, 4782	**ISSN:0024-9297** www.scopus.com/sourceid/21100779404

c. Book Chapter Published

Year	Name of the Book	Publisher	ISBN	Remarks
2020	**Engineering of Biomaterials for Drug Delivery Systems**	**Elsevier-Woodhead publications**	ISBN: 9780081017500	Chapter11. Polypetides: PASylation and XTEN

d. Patent filed

Vallooran J. J. and Mezzenga R. Liquid crystal biosensors. Patent Application 2014 EP14170769.5

e. Any other relevant matters

Completed certified course on ´Start-up Concept´ conducted by Commission of Technology and Innovation (CTI), Switzerland.

Completed certified course on Intellectual Property and Canvas business model.

Completed certified course on 'How to communicate research work to the general public and to TV/Radio audience' from Swiss School of Journalism (MAZ), Switzerland.