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List of Publications

| | |
|-----------------|-----|
| Total citations | 429 |
| h-index | 10 |

* Represents corresponding author

Research Articles

- (17) Singla R., Abidi, S. M. S., Dar, A. I., **Acharya, A.*** "Inhibition of Glycation Induced Aggregation of Human Serum Albumin by Organic-inorganic Hybrid Nanocomposite of Iron Oxide Functionalized Nanocellulose" *ACS Omega* **2019**, 4, 14805-14819.
- (16) Dar, A. I., Walia, S., **Acharya, A.*** "Molecular Recognition Based Rapid Diagnosis of Immunoglobulins via Proteomic Profiling of Protein-nanoparticle Complexes" *Int. J. Biol. Macromolec.* **2019**, 138, 156-167.
- (15) Walia, S., Shukla A. K., Sharma, C., **Acharya, A.*** "Engineered Bright Blue- and Red-Emitting Carbon Dots Facilitate Synchronous Imaging and Inhibition of Bacterial and Cancer Cell Progression via ¹O₂-Mediated DNA Damage under Photoirradiation" *ACS Biomater. Sci. Eng.* **2019**, 5, 1987-2000.
- (14) Guliani, A., Singla, R., Kumari, A., **Acharya, A.*** "Effect of Surfactants on the Improved Selectivity and Anti-Bacterial Efficacy of Citronellal Nano-Emulsion" *J. Food Process Eng.* **2018**, 41, e12888.
- (13) Singla, R., Soni, S., Padwad, Y. S., **Acharya, A.***, Yadav, S. K.* "Sustained Delivery of BSA/HSA From Biocompatible Plant Cellulose Nanocrystals for In Vitro Cholesterol Release From Endothelial Cells" *Int. J. Biol. Macromolec.* **2017**, 104, 748-757.
- (12) Walia, S., Guliani, A., **Acharya, A.*** "A Theragnosis Probe Based on BSA/HSA-Conjugated Biocompatible Fluorescent Silicon Nanomaterials for Simultaneous in Vitro Cholesterol Effluxing and Cellular Imaging of Macrophage Cells" *ACS Sustainable Chem. Eng.* **2017**, 5, 1425-1435.
- (11) Dar, A. I., Walia, S., **Acharya, A.*** "Citric Acid-Coated Gold Nanoparticles for Visual Colorimetric Recognition of Pesticide Dimethoate" *J. Nanopart. Res.* **2016**, 18, 233.
- (10) Walia, S., Sharma, S., Kulurkar P. M., Patial V.*, **Acharya A.*** "A Bimodal Molecular Imaging Probe Based on Chitosan Encapsulated Magneto-Fluorescent Nanocomposite Offers

Biocompatibility, Visualization of Specific Cancer Cells *In Vitro* and Lung Tissues *In Vivo*" *Int. J. Pharma.* **2016**, *498*, 110-118.

- (9) **Acharya, A.***, Rawat, K., Bhat, K. A., Patial, V., Padwad, Y. S. "A Multifunctional Magneto-fluorescent Nanocomposite for Visual Recognition of Targeted Cancer Cells" *Mater. Res. Express* **2015**, *2*, 115401.
- (8) Walia, S., **Acharya, A.*** "Fluorescent Cadmium Sulfide Nanoparticles for Selective and Sensitive Detection of Toxic Pesticides in Aqueous Medium" *J. Nanopart. Res.* **2014**, *16*, 2778.
- (7) **Acharya, A.**, Ramanujam, B., Jugun, P. C., Rao, C. P. "1,3-Diamido-calix[4]arene Conjugates of Amino Acids: Recognition of -COOH Side Chain Present in Amino Acids, Peptides, and Proteins by Experimental and Computational Studies" *J. Org. Chem.* **2011**, *76*, 127-137.
- (6) **Acharya, A.**, Ramanujam, B., Mitra, A, Rao, C. P. "Nano-Fibers Formed through π ... π Stacking of the Complexes of Glucosyl-C2-Salicyl-Imine and Phenylalanine: Characterization by Microscopy, Modeling by Molecular Mechanics and Interaction by α -Helical & β -Sheet Proteins" *ACS Nano* **2010**, *4*, 4061-4073.
- (5) Dey, M., Ali, A., **Acharya, A.**, Rao, C. P. "1,3-Di-peptido-conjugates of Calix[4]arene and its Di-OCH₃ Derivatives: Synthesis, Characterization and Phosphate Recognition" *Indian J. Chem.* **2010**, *49B*, 1098-1108.
- (4) Joseph, R., Ramanujam, B., **Acharya, A.**, Rao, C. P. "Lower Rim 1,3-Di-{bis-(2-picolyl)}amide Derivative of Calix[4]arene (L) as Ratiometric Primary Sensor towards Ag⁺ and the Complex of Ag⁺ as Secondary Sensor towards Cys: Experimental, Computational and Microscopy studies, and INHIBIT Logic Gate Properties of L" *J. Org. Chem.* **2009**, *74*, 8181-8190.
- (3) Jugun, P. C., **Acharya, A.**, Kumar, A., Rao, C. P. "Spectroscopy and Microscopy Studies of the Recognition of Amino Acids and Aggregation of Proteins by Zn(II)-Complex of Lower Rim Naphthylidene Conjugate of Calix[4]arene" *J. Phys. Chem. B* **2009**, *113*, 12075-12083.
- (2) Joseph, R., Ramanujam, B., **Acharya, A.**, Rao, C. P. "Fluorescence Switch-on Sensor for Cu²⁺ by an Amide Linked Lower Rim 1, 3 -bis(2-picolyl)amine Derivative of Calix[4]arene in Aqueous Methanol" *Tetrahedron Lett.* **2009**, *50*, 2735-2739.
- (1) Joseph, R., Ramanujam, B., **Acharya, A.**, Khutia, A., Rao, C. P. "Experimental and Computational Studies of Selective Recognition of Hg²⁺ by Amide Linked Lower Rim 1, 3-Di-Benzimidazole Derivative of Calix[4]arene: Species Characterization in Solution and that in the Isolated Complex, Including the Delineation of the Nanostructures" *J. Org. Chem.* **2008**, *73*, 5745-5758.

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- (7) Singla R., Abidi, S. M. S., Dar, A. I., **Acharya, A.*** "Nanomaterials as Potential and Versatile Platform for Next Generation Tissue Engineering Applications" *J Biomed Mater Res Part B.* **2019**, *107B*, 2433-2449.
- (6) Singla, R., Sharma, C., Shukla, A. K., **Acharya, A.*** "Toxicity Concerns of Therapeutic Nanomaterials" *J. Nanosci. Nanotechnol.* **2019**, *19*, 1889-1907.

- (5) Guliani, A., **Acharya, A.*** “Nanomaterials as Protein, Peptide and Gene Delivery Agents” *Open Biotechnol. J.* **2018**, *12*, 154-165.
- (4) Walia, S., **Acharya, A.*** “Nanomaterials for Chemical and Biological Analyte Detection” *J. Bionanosci.* **2018**, *12*, 316–327.
- (3) Walia, S., **Acharya, A.*** “Silica Micro/Nanospheres for Theranostics: From Bimodal MRI and Fluorescent Imaging Probes to Cancer Therapy” *Beilstein J. Nanotechnol.* **2015**, *6*, 546-558.
- (2) **Acharya, A.*** “Luminescent Magnetic Quantum Dots for *In Vitro/In Vivo* Imaging and Applications in Therapeutics” *J. Nanosci. Nanotechnol.* **2013**, *13*, 3753-3768.
- (1) **Acharya, A.**, Samanta, K., Rao, C. P. “Conjugates of Calixarenes Emerging as Molecular Entities of Nanoscience” *Coord. Chem. Rev.* **2012**, *256*, 2096-2125.

Book Chapters

- (4) Shukla, A. K., Sharma, C., Abidi, S. M. S., **Acharya, A.*** “Spectroscopy and Microscopy of Eco-friendly Polymer Composites”. In *Sustainable Polymer Composites and Nanocomposites*; Inamuddin, Thomas, S., Mishra, R. K., Asiri, A. M. Eds.; **Springer: U.K. 2018**; pp 105-141.
- (3) Kumari, A., Singla R., Guliani, A., Walia, S., **Acharya, A.** and Yadav, S. K.* “Nanoscale Materials in Targeted Drug Delivery”. In *Nanoscale Materials in Targeted Drug Delivery, Theragnosis and Tissue Engineering*; Yadav, S. K., Ed.; **Springer: Singapore, 2016**; pp 1-19.
- (2) Walia, S. and **Acharya, A.*** “Theragnosis: Nanoparticles as a Tool for Simultaneous Therapy and Diagnosis”. In *Nanoscale Materials in Targeted Drug Delivery, Theragnosis and Tissue Engineering*; Yadav, S. K., Ed.; **Springer: Singapore, 2016**; pp 127-152.
- (1) Kumari, A., Singla R., Guliani, A., **Acharya, A.*** and Yadav, S. K.* “Cellular Response of Therapeutic Nanoparticles”. In *Nanoscale Materials in Targeted Drug Delivery, Theragnosis and Tissue Engineering*; Yadav, S. K., Ed.; **Springer: Singapore, 2016**; pp 153-172.

List of Patents

- (3) **Acharya, A.**, Kumari, A., Guliani, A., Kumar, S. “A curcumin loaded stabilized polymeric nanoparticles with increased solubility and photo-stability and a green process for the synthesis thereof” Patent No. **0066NF2018** (Filed on 10/05/2018).
- (2) **Acharya, A.** “A novel hybrid nanocomposite material for Optical/MRI bimodal molecular imaging, and a process for the preparation thereof” Patent No. **IN 2014DE01629**.
- (1) Rao, C. P., **Acharya, A.** “A nanoparticle method of detecting the presence of bisulfite ion (HSO₃⁻) in a sample using a conjugate of calix[4]arene” Patent No. **IN 2011MU01089**.