



Dr. Rohini Dharela
Assistant Professor
Department of Chemistry
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EDUCATIONAL QUALIFICATIONS: B.Sc. (Medical), M.Sc. (Chemistry),
M.Phil, PhD, SET, Dr. D.S. Kothari Post Doc Fellow(2017-2018)

Sr. No.	Degree	Subject	College/University	Year of Passing
1	B.Sc.	Chemistry	Govt. Degree College, Solan	2006
2	M.Sc.	Chemistry	Himachal Pradesh University	2008
3	M.Phil	Chemistry	Himachal Pradesh University	2009
4	Ph.D	Chemistry	Himachal Pradesh University	2013
5	SET	Chemistry	Himachal Pradesh	2008
6	Post Doc	Chemistry	UICET Panjab University	2017-18

TOTAL TEACHING EXPERIENCE: 5 Years

Teaching Experience at Alakh Prakash Goyal Shimla University: 4 year

Teaching Experience at St. Bede's College: 1 year

RESEARCH EXPERIENCE: Major/Minor Project



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OTHER RESPONSIBILITIES

Member:

Research Promotion Cell, Heritage Club

ACHIEVEMENTS

➤ PUBLICATIONS

- ❖ Highly Selective and Rapid Naked-Eye Colorimetric Sensing and Fluorescent Studies of Cu²⁺ Ions Derived from Spherical Nanocellulose, B Ram, S Jamwal, S Ranote, GS Chauhan, R Dharela, ACS Applied Polymer Materials 2 (11), 5290-5299, 2020.
- ❖ Enhanced catalytic activity of new acryloyl crosslinked cellulose dialdehyde-nitrilase Schiff base and its reduced form for nitrile hydrolysis, S Jamwal, UK Dautoo, S Ranote, R Dharela, GS Chauhan, International journal of biological macromolecules 131, 117-126, 2019.
- ❖ New crosslinked poly (ionic liquids) networks as As (V) extractants, UK Dautoo, Y Shandil, S Ranote, S Jamwal, R Dharela, GS Chauhan, Journal of Environmental Chemical Engineering, 103154, 2019.
- ❖ New glucose oxidase-immobilized stimuli-responsive dextran nanoparticles for insulin delivery, S Jamwal, B Ram, S Ranote, R Dharela, GS Chauhan, International journal of biological macromolecules 123, 968-978, 2019.
- ❖ Thiourea functionalized β -cyclodextrin as green reducing and stabilizing agent for silver nanocomposites with enhanced antimicrobial and antioxidant properties, Rahul Sharma, Prem Singh, Rohini Dharela, Ghanshyam Singh Chauhan and Kalpana Chauhan, New Journal of Chemistry 41 (21), 12645-12654, 2017.
- ❖ Stabilization of Uricase by Immobilization on Poly(Acrylic Acid)-Based Nanogels for Therapeutic and Sensing Applications, Rohini Dharela, Sapana Kumari, Ghanshyam S. Chauhan, James Manuel and Jou-Hyeon Ahn, **Science of Advanced Materials**, Vol. 9, pp. 1280-1284, 2017.



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- ❖ Chitosan-thiomer stabilized silver nano-composites for antimicrobial and antioxidant applications, Kalpna Chauhan, Rahul Sharma, Rohini Dharela, Ghanshyam Singh Chauhan and Rakesh Kumar Singhal, **RSC Adv.**, 6, 75453-75464, 2016.
- ❖ New poly(acrylic acid)-based functional nanogels as supports for doxorubicin loading and release, R. Dharela Ghanshyam S. Chauhan, Sanjeev Sharma, Pallavi Chauhan, **AGU International Journal of Science & Technology**, Vol. No. 2, Jan-Jun 2016.
- ❖ New Poly(Acrylic Acid)-Based Functional Nanogels as Supports of Lipase: Evaluation of Hydrolytic Activity of the Immobilized Lipase, R. Dharela and Ghanshyam S. Chauhan, **Current Catalysis**, 5, 35-43, 2016.
- ❖ Synthesis of crosslinked lipase aggregates and their use in the synthesis of aspirin, Shivani Jamwal, Rohini Dharela, Reena Gupta, J.-H. Ahn, Ghanshyam S. Chauhan, **Chemical Engineering Research and Design**, Volume 97, Pages 159–164, May 2015.
- ❖ Functionalized Polyacrylonitrile Nanofibrous Membranes for Covalent Immobilization of Glucose Oxidase, James Manuel, Miso Kim, **Rohini Dharela**, Ghanshyam S. Chauhan, D Fapyane, Soo-Jin Lee, In Seop Chang, Seo Hee Kang, Seon Won, Kim and Jou-Hyeon Ahn, **Journal of Biomedical Nanotechnology**, Vol. 10, 1-7, 2015.
- ❖ Effect of Nanogel Structure and Reaction Parameters on Activity of Immobilized Glucose Oxidase, **Rohini Dharela** and Ghanshyam S. Chauhan, **Current Catalysis**, 2(3), 225 – 236, 2013.
- ❖ Immobilization of Urease onto New Nanogels, Rohini Dharela, Ghanshyam S. Chauhan, and J.-H. Ahn, **Current Catalysis**, 2(2), 122-129, 2013.
- ❖ Synthesis, Characterization, and Swelling Studies of Guar Gum-Based pH, Temperature, and Salt Responsive Hydrogels, **Rohini Dharela**, Lok



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Raj, Ghanshyam S. Chauhan, **Journal of Applied Polymer Science**, Vol. 126, E259–E264, 2012.

- ❖ Structure-Property Relationship in Antimicrobial Polymers Synthesized by Chemo-enzymatic Route, P. Dogra, **R. Dharela**, G.S. Chauhan, R. Gupta, W. Azmi, **Procedia Chemistry**, 4, 208 – 215, 2012.
- ❖ Synthesis and Characterization of Biopolymers Based Networks as Potential Lipase Inhibitors, Manju Kumari, **Rohini Dharela**, Lok Raj and Ghanshyam S. Chauhan, **Trends in Carbohydrate Research**, Vol. 4, No.2. 2012.
- ❖ Polycarboxylated guar gum and starch-based hydrogels as stimuli sensitive carriers for insulin loading and delivery, Kalpana Chauhan, **Rohini Dharela** and Ghanshyam S. Chauhan, **Trends in Carbohydrate Research**, Vol. 3, No. 4. 2011.
- ❖ Evaluation of a New Proline-Based Polymer Monolith as Catalyst in Mannich-Type Reaction, Dipti Grag, Lok Raj, **Rohini Dharela** and Ghanshyam S. Chauhan, **Current Catalysis**, 1, 206-214, 2012.

❖ Paper Presentations

- ❖ Synthesis and Characterization of Guar Gum Based Hydrogels and Their Use for Uptake of Zinc ions, **Rohini Dharela**, Ghanshyam S. Chauhan Recent Advances in Analytical Sciences, HP University, April 12-14, 2010.
- ❖ Synthesis, Characterization and Swelling Studies of Guar Gum-Based pH and Temperature Sensitive Hydrogels, **Rohini Dharela**, Ghanshyam S. Chauhan Recent Advances in Chemistry and Technology of Carbohydrates (CARBO XXV), HP University, November 11-13, 2010.
- ❖ Covalent Immobilization of Invertase on Poly (methacrylic Acid)-Based Hydrogels, Lok Raj, Sunil Kumar, **Rohini Dharela**, Ghanshyam S. Chauhan, Proceedings of Polymer Science and Engineering: Emerging dimensions (PSE-2010), Panjab University, Chandigarh, November 26-27, 2010.
- ❖ Synthesis and Characterization of pH and temperature sensitive N-vinyl pyrrolidone Grafted Guar gum based hydrogels for zinc ion uptake,



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Rohini Dharela and Ghanshyam S. Chauhan, International Year of Chemistry (IYC 2011), Celebrating Achievements and Contribution of Chemistry to Humankind, HP University, October 20-22, 2011.

- ❖ Synthesis and Characterization of Poly(acrylic acid)-based New Nano-Hybrid Polymers for Uptake of Malachite Green, Ashish Kumar, **Rohini Dharela**, Ghanshyam S. Chauhan FPS,2011, HPU.
- ❖ Covalent Immobilization of Urease on poly(Acrylic Acid)-Based Functional Nanogel for Use as Bio-sensor, Ghanshyam S. Chauhan and **Rohini Dharela**, Healthcare-2012, APA Conference, February 19-22, 2012, IITD and Jamia Hamdard, , New Delhi.
- ❖ Covalent Immobilization of Catalase on poly(Acrylic Acid)-Based Functional Nanogel for Use as H₂O₂ Sensor, **Rohini Dharela** and Ghanshyam S. Chauhan, PlastIndia-2012 Delhi, Hotel Hilton Eros. IIT-D February 2-3, 2012.
- ❖ Designing New Antimicrobial Polymers Based on Muslin, Sunil Kumar, **Rohini Dharela**, Sapana Kumari, and Ghanshyam S Chauhan, Healthcare-2012, APA Conference, February 19-22, 2012, IITD and Jamia Hamdard, New Delhi.
- ❖ Immobilization of Uricase on New Poly (Acrylic Acid)-Based Nanogels, **Rohini Dharela** and Ghanshyam S. Chauhan, Asian Polymer Association and UICET, Panjab University, Chandigarh A Conference, February 21-23, 2013, Panjab University, Chandigarh, India.
- ❖ New Poly (acrylic Acid)-based Functional Nanogels As Supports for Doxorubicin Loading and Release, **Rohini Dharela** and Ghanshyam S. Chauhan, Asian Polymer Association, APA-2014, Indian Habitat Centre, Delhi, February, 2014.
- ❖ Synthesis of Hyroxyl propyl Methyl Cellulose-co-poly(Acrylic amide)-*cl*-citric acid based nanogels via Green protocol, **Rohini Dharela**, Achal Kumar Pathik, Ghanshyam S Chauhan and Anupama Sharma, NanaoSciTech 2017, Panjab University, Chandigarh, 09-10 November, 2017.
- ❖ Synthesis of citric acid crosslinked biopolymer, **Rohini Dharela**, Ghanshyam S Chauhan and Anupama Sharma, Recent Advances and



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Research innovations in Engineering and Technology (RARIET-2017),
A P Goyal Shimla University, Shimla, Himachal Pradesh, 17-18
November, 2017.

AWARDS

- ❖ Presented **Best poster** for, Covalent Immobilization of Invertase on Poly (methacrylic Acid)-Based Hydrogels, at Proceedings of Polymer Science and Engineering: Emerging dimensions (PSE-2010) held in Panjab University, Chandigarh, November 26-27, 2010.
- ❖ Presented **Best poster** for, New Poly (acrylic Acid)-Based functional nanogels as supports for doxorubicin loading and release, at APA-2014 held in Indian Habitat Centre, Delhi, February, 2014.

- ❖ **Participation in Conferences and Seminars**
Same as the above mentioned ones in which presented papers.

- ❖ **Resource Person**
 - Acted as a reviewer in “Pharmacological Uses of Medicinal Plants and Natural Products” published by IGI Global 2019.
 - Acted as an external expert for Book to be published by IGI Global.

- ❖ **Discussant**
 - Moderated webinars organized at Alakh Prakash Goyal Shimla University.
 - Life member of Asian Polymer Association.