Name: Dr.Mayur C Valodkar

Designation: Adjunct Assistant Professor &

Manager (Research) at GSFC

Phone: **9773287493**
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School: School of Science

Research Interest:

- **Synthesis of various Polymers using different Polymerization techniques.**
- **Synthesis of various Nanoparticles, Nanocomposites, Bionanocomposites & Alloys.**
- **Development of various synthetic Rubbers and their compounding.**
- **Development of controlled release fertilizers.**
- **Recovery of valuable materials from Effluent stream.**
- **Synthesis of various organic products such as Melamine Cyanurate, Hexamethoxymethyl Melamine, Butylated Melamine etc.**
- **Development of various Pharma grade products & Speciality chemicals.**
- **Development of import substitute fertilizers having high market demand.**

Academic Background:

Degree	Subject	University	Year
Ph.D	Chemistry	The M.S.University of Baroda, Vadodara	2013
M.Sc	Polymer Chemistry	S.P.University, Vallabhvidyanagar	2008
B.Sc	Chemistry	S.P.University, Vallabhvidyanagar	2006

Professional Experience:

From	Period	Position	Organisation
March'2014 to till date	>7 years	Manager (Research)	Gujarat State Fertilizers & Chemicals Ltd.,
Oct'2011to March'2014	2.5 years	Research Scientist	Jubilant Industries

Teaching Engagements:

Title	Course Code	Class Name	School Name
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Publications:

Journal Publications:

1. Mayur Valodkar, Sonal Thakore, Isocyanate crosslinked reactive starch nanoparticles for thermo-responsive conducting applications Carbohydrate Research 345, 2354, 2010.
2. Mayur Valodkar, Sonal Thakore, Biopolymers as effective natural fillers in natural rubber: Composites versus Biocomposites Journal of Applied Polymer Science 124, 3815, 2010.
3. Mayur Valodkar, Sonal Thakore, Thermal and mechanical properties of nanobiocomposites of Natural rubber and Starch International Journal of Polymer Analysis and Characterisation 15, 1, 2010.
4. Mayur Valodkar, Sonal Thakore, Organically modified nanosized starch derivatives as excellent reinforcing agents for bionanocomposites Carbohydrate Polymers 86, 1244, 2011.
5. Mayur Valodkar, Puran Singh Rathore, Arun Vadgama, Sonal Thakore, Nanosized cellulose derivatives as green reinforcing agents at higher loading in natural rubber Journal of applied polymer science 131, 40632, 2014 .
6. Mayur Valodkar, Puran Singh Rathore, Poonam Sharma, Dinesh Kanchan, Mehul Patel, Sonal Thakore, Immobilization of metal nanoparticles on polyurethane membranes: synthesis and electrical properties Polymer international 61(12), 1745, 2012

7. Mayur Valodkar, Jigar Y Soni, komal Vyas, Rajendrasinh Jadeja, Ranjitsinh Devkar, Puran Singh Rathore, Sonal Thakore, Synthesis and cytotoxicity evaluation of novel acylated starch nanoparticles Bioorganic Chemistry 46, 26, 2013
8. Mayur Valodkar, Arti Bhadoria, Jayshree Pohnekar, Mukta Mohan, Sonal Thakore, Morphology and anti-bacterial activity of carbohydrate stabilized silver nanoparticles Carbohydrate Research 345, 1767, 2010
9. Mayur Valodkar, Poonam Sharma, Dinesh Kanchan, Sonal Thakore, Conducting and antimicrobial properties of silver nanowire - waxy starch nanocomposites International Journal of Green Nanotechnology 2, 10, 2010
10. Mayur Valodkar, Shefaly Modi, Angshuman Pal, Sonal Thakore, Synthesis and anti-bacterial activity of Cu, Ag and Cu–Ag alloy nanoparticles: A green approach Materials Research Bulletin 46, 384, 2011.
11. Mayur Valodkar, Amit Thakor, Angshuman Pal, Sonal Thakore, Synthesis and characterization of cuprous oxide dendrites: New simplified green hydrothermal route Journal of Alloys and Compounds 509, 523, 2011.
12. Mayur Valodkar, Padamanabh S. Nagar, Ravirajsinh N. Jadeja, Menaka Thounaojam, Ranjitsinh V. Devkar, Sonal Thakore, Euphorbiaceae latex induced green synthesis of non-cytotoxic metallic nanoparticle solutions: a rational approach to antimicrobial applications Colloids and Surfaces A: Physichemical and Engineering Aspects 384, 337, 2011.

Patents:

1. A process for synthesis of Nanosized Hydrophobic Polysaccharide Derivatives
   Mayur Valodkar and Sonal Thakore
   Indian Patent No. 274199
2. Bionanocomposites of Natural Rubber and hydrophobic Polysaccharide derivatives

Mayur Valodkar and Sonal Thakore

Indian Patent No. 292910

Book Chapter:

Anantakumar Mishra, Mayur. C. Valodkar, "*Polymer Nanocomposites for Energy and Fuel Cell Applications*" In: "Properties and Applications of Polymer Nanocomposites Clay and Carbon Based Polymer Nanocomposites" Eds: D. K. Tripathy, B. P. Sahoo. *Publisher: Springer-Verlag GmbH* (2017) page 107-137. ISBN: 978-3-662-53515-8.

Papers accepted at National & International Conference

- Biocomposites of Natural Rubber: Effect of various biopolymers as fillers
Mayur Valodkar and Sonal Ishit Thakore

Poster presented at MACRO 2009 held at IIT Madras in March 2009.

- Thermomechanical properties of nanobiocomposites of natural rubber and Starch
Mayur Valodkar and Sonal Ishit Thakore.

Paper accepted for oral presentation at ICAM 2009, Brazil.

- Synthesis of hydrophobic biopolymer derivatives for potential application in nanobiocomposites.
Mayur Valodkar and Sonal Ishit Thakore

Paper accepted for oral presentation at PSE-2010, held at Panjab University, Chandigarh in November 2010.

- Nanosized polysaccharides as potential fillers in the development of bionanocomposites
Mayur Valodkar, Arun Vadgama, Puran Singh Rathore, Jacky Advani and Sonal Thakore

Book: ----

Awards/Recognitions:

- Received Talati Pariver Prize-2010 “Outstanding Research Student Award” The M. S. University of Baroda, Vadodara.
- Awarded CSIR Senior Research Fellowship in April-2011.