



**Sinhgad Technical Education Society's**  
**Sinhgad College of Engineering**  
 Vadgaon (Budruk) Off. Sinhgad Road, S.No. 44/1, Pune- 41

Dr. Sachin Shirsath  
**PhD (Chemical Engineering)**  
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**Academic Qualification**

Degree	Institute Name	University Name	Year of Passing	Percentage	Grade	Qualification Status
BE Chemical	PREC, Loni	Pune university	1993	61.0%	First Class	Completed
ME Chemical	TKIET, Warananagar	Shivaji University	2003	71.41%	Distinction	Completed
PhD	Vishwakarma Institute of Technology, Pune- 37	Savitribai Phule Pune University	2015	-	-	Completed

**Significant Achievement**

- Received Summer Research Fellowship sponsored by Indain Academy of Sciences, Bangalore, INSA, New Delhi, and NASI, Allahabad. Was selected as Fellow for undergoing Summer Training at ICT, Matunga, Mumbai during May June 2010. This fellowship is only for Teachers from all engineering colleges across the country.
- Working as Reviewer for Internationally Renowned Journals
  1. Industrial & Engineering Chemistry Research
  2. Ultrasonics Sonochemistry
  3. Chemical Engineering Journal
  4. Industrial & Engineering Chemistry Research
  5. Journal of Environmental Chemical Engineering
  6. Journal of Food Process Engineering
  7. Food Chemistry

**Training Details**

Training Title	Arrange By	Venue	Date	Level	Category	Type
Applications Of Nanotechnology & Nanoscience In Science,	Priyadarshini Institute of Engineering &	Online	12 to 17 July 2021	National	Quality improvement program	External

Engineering & Technology	Technology, Nagpur					
Two months summer internship	Indian Academy of Sciences, Bangalore	Institute of Chemical Technology, Matunga, Mumbai	1 <sup>st</sup> May 2010 to 29 <sup>th</sup> June 2010	National	Quality improvement program	External
Unit Operations and Unit Processes with Plant Visit	Rashtriya Chemicals and Fertilizers Limited, Thal, Alibagh	Rashtriya Chemicals and Fertilizers Limited, Thal, Alibagh	12 <sup>th</sup> June to 14 <sup>th</sup> June 2017	National	Quality improvement program	External
Refresher course on Basic concepts and advances in Chemical Engineering	Institute of Chemical Technology, Matunga, Mumbai	Institute of Chemical Technology, Matunga, Mumbai	12 to 14 March 2008	Institute	Research	External
DST-SERC School on “Cavitationally Induced Physical and Chemical Transformations: Fundamentals & Applications	Institute of Chemical Technology, Matunga, Mumbai	Institute of Chemical Technology, Matunga, Mumbai	9-12 <sup>th</sup> October 2006	National	Quality improvement program	External

### Conference Details

Name	Venue	Date	Level	Category	Type	Sponsored By
Materials and system engineering (ICMSE-2021)	Online	7-8 May 2021	International	Quality improvement program	International	Technical Institute for Engineers
CHEMCON 2020	Online	27-29 December, 2020	National	Quality improvement program	National	IChE
INNOVATION 2017	Rajarshi Shahu College of Engineering, Pune	13 <sup>th</sup> November 2017	National	Quality improvement program	National	University of Pune

INNOVATION 2012	Maharashtra Academy of Engineering, Alandi, Pune	19-20 March 2012	National	Quality improvement program	National	University of Pune
INNOVATION 2009	Sinhgad College of Engineering, Pune	16-17 December 2009	National	Quality improvement program	National	University of Pune
NCBPEE 2007	STES, Vadgaon, Pune	02 Feb 2007 - 03 Feb 2007	National	Management Development Program	National	Engineering Education Foundation, Pune
PICETE 2008	PREC, Loni	20- 22 Dec 2008	International	Quality improvement program	International	University of Pune, IIChe
INCON - 2004	College of Engineering, Pune	19-21 <sup>st</sup> December 2004	International	Quality improvement program	International	Indian Society of Instrumentation

### Workshop/Seminar Attended

Workshop Topic	Conducted By	Date	Level	Category	Type
Catalysis and Reaction Engineering	Laxminarayan Institute of Technology, Nagpur	22 February to 6 March, 2021	National	Quality improvement program	External
Intellectual Property Rights & Patents	Smt Kashibai Navale College of Engineering, Pune	27 <sup>th</sup> December 2016	Intra-Institutional Seminar	Quality improvement program	External
Process Intensification	Institute of Chemical Technology, Matunga, Mumbai	9 <sup>th</sup> -10 <sup>th</sup> September 2016	National	Quality improvement program	External
Sonoprocess Engineering & Reactors for Nanomaterials	NIT, Warangal	23 <sup>rd</sup> February to 24 <sup>th</sup> February 2013	National	Quality improvement program	External
Environmental Manangement	IIT, Bombay	13-17 October 2008	National	Quality improvement program	External
Membrane Bioreactors	PREC, Loni	22 <sup>nd</sup> May to 4 <sup>th</sup> June 2008	National	Quality improvement program	External
Biotechnology	PREC, Loni	2 November 2007	National	Quality improvement program	External

Quality, Sustainability and Social Responsibility: Interfaces in Technical Education In Context of Globalization	BIT, Sathyamangalam, Tamilnadu	14-16 <sup>th</sup> December 2006	National	Quality improvement program	External
Separation Technologies in Water Management	Sinhgad College of Engineering , Pune	25 <sup>th</sup> March 2005	Intra-Institutional Seminar	Intra-Institutional Seminar	Internal
Recent Developments in Chemical Engineering	IICChE, Pune Regional Center	24 <sup>th</sup> march 2005	National	Quality improvement program	External
Recent Advances in Bearings & Lubricants	Sinhgad College of Engineering , Pune	5 <sup>th</sup> July 2004	Intra-Institutional Seminar	Intra-Institutional Seminar	Internal
Solar Energy Engineering	College of Engineering, Pune	13 <sup>th</sup> March 2001	National	Quality improvement program	External

### Research Projects

Project Title	Description	Status	Budget	Project type
Synthesis of Nanoparticles using plant extracts in microreactor	Silver nanoparticles were synthesized using plant extract as an alternative method for avoiding the use of hazardous chemicals. The use of leaf extract was done as reducing and capping agent. The experiments were conducted in a Batch and Micro-reactor. Very small particle size was achieved with microreactor as compared to batch reactor.	Completed	1.40 Lakhs	Research
Ultrasound assisted Saponification of vegetable oils in presence of Phase Transfer Catalyst	Different vegetable oils were saponified using aqueous KOH and different PTCs in the presence of ultrasound. The extent of saponification was studied using saponification values as references. Optimization of various parameters such as temperatures selection of PTCs and quantity of KOH were carried out.	Completed	2.40 Lakhs	Research

## Funded Workshop/Seminar

Title of the Workshop/Seminar	Funds Sanctioned (Rs)	Funding Agency	Date
Nanostructured materials in Catalysis	1.00 Lakh	Science and Engineering Research Board, New Delhi	25 <sup>th</sup> to 29 <sup>th</sup> March 2019
Optimization in Chemical Process Industries	2.00 Lakhs	AICTE, New Delhi	14 <sup>th</sup> to 26 <sup>th</sup> June 2010

## Workshop/Training Program Conducted as Coordinator

Sr. No.	Title of Program	Date
1	Three day Workshop on “Utilities and Automation in Chemical Process Industries”	28 to 30 June 2017
2	One week training programme on “Optimization in Chemical Process Industries	16 to 23 November 2009
3	Three day training programme on “Applications of MATLAB in Chemical Engineering ”	21 to 23 April 2008

## Research Papers and Journals

ISSN/ISBN No	Paper Title	Publis h Date	Journal/Confe rence Name	Level	Paper Status	Authors
ISSN: 0255-2701	Ultrasound assisted curcumin recovery from Curcuma aromatica: Understanding the effect of different operating parameters	2021	Chemical Engineering & Processing: Process Intensification	Refereed Journal	Accepted and Published	Sachin Shirsath
ISBN: 9780128214961	Metal-organic framework nanocomposite-based adsorbents	2021	Handbook of Nanomaterials for Wastewater Treatment: Fundamentals and Scale up Issue	Refereed Journal	Accepted and Published	Sachin Shirsath
ISSN:2214-7853	Review on membrane technology for separation of biodiesel	2021	Materials Today: Proceedings	Refereed Journal	Accepted and Published	Sachin Shirsath
ISSN:0030-4026	Sonochemical preparation of ternary rGO-ZnO-TiO <sub>2</sub> nanocomposite photocatalyst for efficient degradation of crystal violet dye	2020	Optik International Journal for Light and Electron Optics	Refereed Journal	Accepted and Published	Sachin Shirsath

ISSN:0030-4026	Sonochemical preparation of multifunctional rGO-ZnS-TiO <sub>2</sub> ternary nanocomposite and its application for CV dye removal	2020	Optik International Journal for Light and Electron Optics	Refereed Journal	Accepted and Published	Sachin Shirsath
ISSN:2352-507X	Ultrasound assisted preparation of rGO/TiO <sub>2</sub> nanocomposite for effective photocatalytic degradation of methylene blue under sunlight	2020	Nano-Structures & Nano-Objects	Refereed Journal	Accepted and Published	Sachin Shirsath
ISSN:1383-5866	Recovery of uranium from lean streams by extraction and direct precipitation in microchannels	2019	Separation and Purification Technology	Refereed Journal	Accepted and Published	Sachin Shirsath
ISSN: 1350-4177	Ultrasound assisted preparation, characterization and adsorption study of ternary chitosan-ZnO-TiO <sub>2</sub> nanocomposite: Advantage over conventional method	2019	Ultrasonics Sonochemistry	Refereed Journal	Accepted and Published	Sachin Shirsath
ISSN: 1350-4177	Intensification of extraction of curcumin from Curcuma amada using ultrasound assisted approach: Effect of different operating parameters	2017	Ultrasonics Sonochemistry	Refereed Journal	Accepted and Published	Sachin Shirsath
ISBN: 9781315225395	Microwave-Assisted Extraction of Carvone from Carum carvi	2017	Novel Water Treatment and Separation Methods: Simulation of Chemical Processes	Refereed Journal	Accepted and Published	Sachin Shirsath
ISSN: 1350-4177	A novel approach for continuous synthesis of calcium carbonate using sequential operation of two sonochemical reactors	2017	Ultrasonics Sonochemistry	Refereed Journal	Accepted and Published	Sachin Shirsath
ISSN:2213-3437	Ultrasonically prepared poly(acrylamide)-kaolin composite hydrogel for removal of crystal violet dye from wastewater	2015	Journal of Environmental Chemical Engineering	Refereed Journal	Accepted and Published	Sachin Shirsath
ISSN: 1350-4177	Continuous precipitation of calcium carbonate using sonochemical Reactor	2015	Ultrasonics Sonochemistry	Refereed Journal	Accepted and Published	Sachin Shirsath
ISSN: 1350-4177	Removal of Brilliant Green from wastewater using conventional and ultrasonically prepared poly(acrylicacid) hydrogel loaded with kaolin clay: A comparative study	2013	Ultrasonics Sonochemistry	Refereed Journal	Accepted and Published	Sachin Shirsath

ISSN: 1350-4177	Ultrasound assisted synthesis of doped TiO <sub>2</sub> nano-particles: Characterization and comparison of effectiveness for photocatalytic oxidation of dyestuff effluent	2013	Ultrasonics Sonochemistry	Refereed Journal	Accepted and Published	Sachin Shirsath
ISSN: 0970-2083	Dye wastewater treatment: Removal of reactive dyes using inorganic and organic coagulants	2013	Journal of Industrial Pollution Control	Refereed Journal	Accepted and Published	Sachin Shirsath
ISSN: 13858947	Intensification of extraction of natural products using ultrasonic irradiations—A review of current status	2012	Chemical Engineering and Processing	Refereed Journal	Accepted and Published	Sachin Shirsath
ISSN: 0011-9164	Ultrasound assisted preparation of nanoclay Bentonite-FeCo nanocomposite hybrid hydrogel: A potential responsive sorbent for removal of organic pollutant from water	2011	Desalination	Refereed Journal	Accepted and Published	Sachin Shirsath
ISSN:	An Innovative Method For Effective Macro-mixing Of CO <sub>2</sub> During Synthesis Of Nanocalcite Crystal Using Sono-Chemical Carbonization	2008	Chemical Engineering Journal	Refereed Journal	Accepted and Published	Sachin Shirsath
ISSN: 0009-2517	NPV- A Biopesticide	2007	Chemical Engineering World	Refereed Journal	Accepted and Published	Sachin Shirsath
ISSN: 0009-2517	Internal Reboiler In Distillation Column	2007	Chemical Engineering World	Refereed Journal	Accepted and Published	Sachin Shirsath
ISSN: 0009-2517	Ultrasonic Waves for Rapid Heat Transfer	2005	Chemical Engineering World	Refereed Journal	Accepted and Published	Sachin Shirsath
ISSN: 0045-6500	Conducting Polymers	2002	Chemical Weekly	Refereed Journal	Accepted and Published	Sachin Shirsath
ISSN: 0045-6500	Treatment of Effluent From Sugar Industry	1998	Chemical Weekly	Refereed Journal	Accepted and Published	Sachin Shirsath

## Membership Details

Membership Body	Details	Duration	Level
Indian Society for Technical Education	Life Member	From 01 Jan 2009	National

**Posts Held**

<b>Organization Name</b>	<b>Post</b>	<b>Organization Category</b>	<b>Appointment Status</b>	<b>Duration</b>
P. Dr. V. V. P. S. S. K Ltd. (Chemical Division- Glyoxal Plant)	Shift Engineer	Public Ltd. Company	Full Time	Apr 01,1993 to Feb 18,1995
Pravara Rural Engineerig College, Loni	Lecturer	Pvt Educational Institute	Permanent	Mar 01,1995 to Jul 31,1995
Sinhgad College of Engineering, Pune	Professor	Pvt Educational Institute	Permanent	Aug 01,2003 - till date

**Books Published**

<b>ISBN</b>	<b>Title</b>	<b>Publisher</b>	<b>Publish Year</b>
ISBN 81-8990-480-9	Transport Phenomena	Denett & co. Nagpur	Dec 2011
ISBN 81-7660-148-9	Chemical Engineering Materials	Everest Publishing House, Pune	Dec 2010
ISBN 81-8990-482-8	Mass Transfer	Denett & co. Nagpur	Dec 2010

**Declaration**

I hereby declare that all the above information furnished by me is true to the best of my knowledge.

Dr. Sachin R. Shirsath