

**Research &
Academic Profile for
Institute Web page**

PROFILE



Name: Dr. Rama Gaur

Designation: Assistant Professor
Department of Chemistry,
School of Technology,
Pandit Deendayal Energy
University,
Gandhinagar.

Email: Rama.Gaur@sot.pdpu.ac.in

Area of Interest: Synthesis of nanoscale materials with interesting and unique morphologies by simple and economical chemical approaches. Shape and size dependent optical, magnetic and electrochemical properties. Application in photocatalysis, optoelectronics, electrochemical sensing, electrocatalytic reduction/oxidation, solar energy conversion, energy storage devices, supercapacitors,, water splitting and environmental remediation.

Meet our team

Ph. D. Research Scholar



Krunal Parekh



Jinal Patel



Zenab Darban



Veena Sodha



Stuti Jha

Master's Students



Rushik Radadiya



Jaydeep Chauhan

Bachelor's Students



Vivek Jain



Shikha Shah

Educational Qualification

- PhD Chemistry- Indian Institute of Technology- June 2017
- MSc Chemistry- Dayalbagh Educational Institute 2012
- B.Sc.B.Ed.- Regional Institute of Education (NCERT) 2010
- Intermediate- Kendriya Vidyalaya, Kamla Nehru Nagar (C.B.S.E) 2006
- High School- St. Paul's Academy, Ghaziabad (I.C.S.E) 2004

Experience Record

- **PRESENT POSITION:** Assistant Professor, Pandit Deendayal Petroleum University, Gandhinagar, Gujarat, (December 2019- Till Date)
- **PREVIOUS POSITIONS:**
 - Assistant Professor, SRM University, Delhi/NCR campus, Sonapat, Haryana, (September 2019-November 2019)
 - Assistant Professor (Contractual), Indian Institute of Information Technology Una (H.P.) (Jan 2019-August 2019)
 - Guest Faculty (Contractual), National Institute of Technology Hamirpur (H.P.) (July 2018-December 2018)
 - Assistant Professor, School of Chemical & Physical Sciences at Lovely Professional University, Punjab, India (August 2017 to May 2018)
- **RESEARCH EXPERIENCE:**
 - Ph.D. Scholar Indian Institute of Technology, Roorkee, India Jan 2013 to June 2017
 - Project Assistant at Indian Institute of Petroleum (CSIR-IIP) Dehradun, India Sept 2012 – Dec 2013, Project Title: "Upgradation of residual fuel oil"
 - Dayalbagh Educational Institute Agra) Dissertation May 2011- December 2011 Project Title: "Nanostructured bilayered semiconductor thin films for photoelectrochemical splitting of water for hydrogen production"
- **VOLUNTEERING EXPERIENCE:**
 - Trainer cum Mentor, Universal Human Values, AICTE.
 - Trainer at MakeIntern (Since 2019). • Child Mentor at CRY IIT Roorkee Chapter (2016-2017).
 - International Conference on Advanced Materials for Energy, Environment and Health (ICAM- 2016), organized by Department of Chemistry, IIT Roorkee on 4-7 March 2016.
 - IshanVikas Program organized by the Ministry of Human Resource Development, Government of India, June 11-19, 2015.

Administrative Responsibilities

- **Course coordinator**, Applied Chemistry at Lovely Professional University, Punjab (2017)
- **Course coordinator**, Engineering Chemistry at Lovely Professional University, Punjab (2017)
- **Faculty-In-Charge**, Students activities at Indian Institute of Information Technology, Una (2019)
- **Deputy centre-In-Charge-2019** (CSAB/JoSAA) at Indian Institute of Information Technology, Una • **Faculty-In-Charge**, Admissions at Indian Institute of Information Technology, Una (2019)
- **BoS team member** at Indian Institute of Information Technology, Una (2018-2019)
- **Coordinator**, Summer term program at Indian Institute of Information Technology, Una (2019)
- **Coordinator**, Institute Induction Program Cell (IIPC) at Indian Institute of Information Technology, Una (2019)
- **UG & PG Admission team Committee member**, School of Technology, Pandit Deendayal Energy University, Gandhinagar (2020-2022)
- **BoS team Committee member**, School of Technology, Pandit Deendayal Energy University, Gandhinagar • NAAC Criteria V, member of the committee, Department of Chemistry, School of Technology, Pandit Deendayal Energy University, Gandhinagar (2020-2022)
- **Editor/Co-ordinator** for Department Newsletter "CHEMSTREET" at Department of Chemistry, School of Technology, Pandit Deendayal Energy University, Gandhinagar (2020-2021)
- **Conveners**, NAAC Criteria-V: Student Support and Progression
- **Member**, Institute Quality Assurance Committee, School of Technology, Pandit Deendayal Energy University, Gandhinagar (2020-2021)
- **Theme Co-ordinator**, International Symposium on Materials of the Millennium: Emerging Trends and Future Prospects (MMETFP-2021) School of Technology, Pandit Deendayal Energy University, Gandhinagar (2021)
- **Working Committee Member**, International Conference on Additive Manufacturing and Advanced Materials - AM2 2021, School of Technology, Pandit Deendayal Energy University, Gandhinagar (2021)

Publications/ Articles/ Conference

- Rama Gaur, P. Jeevanandam, "Synthesis and characterization of Cd_{1-x}Zn_xS (x=0-1) nanoparticles by thermal decomposition of bis(thiourea) cadmium-zinc acetate complexes", in ChemistrySelect, 2016, 1, 2687-2697. (doi.org/10.1002/slct.201600298)
- Rama Gaur, P. Jeevanandam, "PbS micro-nanostructures with controlled morphologies by a novel thermal decomposition approach", in Journal of Nanoparticle Research, 2016, 18(3), 1-13. (doi.org/10.1007/s11051-016-3382-5)
- Rama Gaur, P. Jeevanandam, "Effect of anion on morphology of CdS nanoparticles prepared via thermal decomposition of different cadmium thiourea complexes in a solvent and solid state", in New Journal of Chemistry, 2015, 39(12), 9442-9453. (doi.org/10.1039/C5NJ01605C).
- Rama Gaur, P. Jeevanandam, "Synthesis of Cd_{1-x}Zn_xS nanoparticles by a novel thermal decomposition approach and studies on their optical properties", in Journal of Material Science: Materials in Electronics, 2015, 26(9), 7223-7231. (doi.org/10.1007/s10854-015-3348-x)
- Rama Gaur, P. Jeevanandam, "Evolution of different morphologies of CdS nanoparticles by thermal decomposition of bis (thiourea)cadmium chloride in various solvents", in Journal of Nanoparticle Research, 2015, 17(3), 1-13. (doi.org/10.1007/s11051-015-2961-1)
- Rama Gaur, P. Jeevanandam, "Thermal decomposition approach for the synthesis of SnS₂ nanoparticles and their application as photocatalysts for the reduction of Cr(VI)", Journal of Nanoscience and Nanotechnology, 2018, 165-177. (doi.org/10.1166/jnn.2018.14604)
- Rama Gaur, "Morphology dependent activity of PbS nanostructures for electrochemical sensing of dopamine" Materials Letters, 2020, 127333/1-4, (doi.org/10.1016/j.matlet.2020.127333)
- Rama Gaur*, Syed Shahabuddin, Nandini Mukherjee and Prakash Chandra "Recent advances in nanostructured transition metal sulfide-based sensors for environmental applications" manuscript submitted to Materials Today Proceeding.
- Arun Chauhan, Rama Gaur & Rahul Singh, Evaluation of potential putative probiotics isolated from snakeheaded fish to control Pseudomonas aeruginosa infection in Cyprinus carpio, Aquaculture Nutrition [Ref: ANU-21-199].
- SyedShahabuddinabRamaGaurNandiniMukherjeeaPrakashChandraaRashminKhanamc, Conducting polymers-based nanocomposites: Innovative materials for waste water treatment and energy storage, Materials Today: Proceedings, Available online 31 December 2021, <https://doi.org/10.1016/j.matpr.2021.12.335>

Research Grants/Funding

- DST TARE Grant for the project title “Studies on optical, electrical and microstructural properties of MoS₂, SnS₂ and MoS₂-SnS₂ hybrid nanostructured thin films for solar cell applications” Dec 2020-Dec 2023
- “Cost Effective Approach Towards Recycling of Used Lubricant Oil using Polyaniline Based Clay Composites” Sponsored Research Project – SRP 2021, PDEU (Sep 2021-August 2022)

Thesis/Project supervised

Name of the student	Title	Affiliation	Year of Submission
Mr. Akhil Kumar, M.Sc.	Dissertation on Nanoparticles based heat absorption coatings	School of Chemical & Physical Sciences at Lovely Professional University, Punjab	2018
Archana Rani, B.Sc. (Hons.)	Dissertation on Synthesis of Ag-ZnO nanocomposites and their applications as antimicrobial agents	School of Chemical & Physical Sciences at Lovely Professional University, Punjab	2018
Neha Parashar, B.Sc. (Hons.)	Dissertation on Synthesis of ZnO nanorods their applications as adsorbents for industrial dyes	School of Chemical & Physical Sciences at Lovely Professional University, Punjab	2018
Digvijay vaghela, B.Sc. (Hons.)	Dissertation on Synthesis and characterization of ZnO - MoS ₂ hetero-nanostructures for sensing application	Department of Chemistry, School of Technology, Pandit Deendayal Energy University, Gandhinagar	2020
Riti Shrivastava, B.Sc. (Hons.)	Dissertation on Bio-waste based materials for oil spill remediation	Department of Chemistry, School of Technology, Pandit Deendayal Energy University, Gandhinagar	2020
Rushik Ragadiya, M.Sc.	Research Seminar on GC-MS as a tool for mechanistic study of photocatalytic degradation of dye	Department of Chemistry, School of Technology, Pandit Deendayal Energy University, Gandhinagar	2021
Meshwa Shah, B.Sc. (Hons)	Research Seminar on Potential of Metal Sulfides in Electrochemical Sensing	Department of Chemistry, School of Technology, Pandit Deendayal Energy University, Gandhinagar	2021
Hemendra Raol, B.Sc. (Hons.)	Research Seminar on Nanostructured metal sulphides for energy storage	Department of Chemistry, School of Technology, Pandit Deendayal Energy University, Gandhinagar	2021
Jinal Patel, Ph.D.	Advanced Carbon based nanomaterials for photocatalytic degradation of Organic pollutants	Department of Chemistry, School of Technology, Pandit Deendayal Energy University, Gandhinagar	Ongoing
Stuti Jha, Ph.D.	Biochar/CP based nanocomposites for enhanced removal of coloured dyes from industrial water	Department of Chemistry, School of Technology, Pandit Deendayal Energy University, Gandhinagar	Ongoing
Zenab Darban, Ph.D.	Green hydrogels based adsorbent materials for removal of heavy metals	Department of Chemistry, School of Technology, Pandit Deendayal Energy University, Gandhinagar	Ongoing

Events (Workshop/Webinar) Organized:

1. One-day workshop “Publish or Perish: Strategies for Scientific Research Publication” on February 29, 2020 at Department of Chemistry, School of Technology, Pandit Deendayal Energy University, Gandhinagar.
2. Inter-School National Science Day Quiz on 28th Feb 2021, at School of Technology, Pandit Deendayal Energy University, Gandhinagar.
3. Webinar on “The SHE of Science World” on the occasion of International Women’s Day on March 08, 2021 at Department of Chemistry, School of Technology, Pandit Deendayal Energy University, Gandhinagar.
4. Informational Webinar on "Electrochemical Methods: Techniques to Applications” in collaboration with Fudan University China and IIT BHU, on April 5, 2021 at School of Technology, Pandit Deendayal Energy University, Gandhinagar.
5. 2 Day International Webinar on "Waste to Best: Sustainable Environmental Remediation Strategies & Solution" in collaboration with Iran and Malaysia at PDEU on 12th – 13th April 2021, at Department of Chemistry, School of Technology, Pandit Deendayal Energy University, Gandhinagar.
6. Webinar on “Science & Innovation: PDEU Ways” jointly organized by Department of Physics and Chemistry and Mathematics on April 25, 2021 at School of Technology, Pandit Deendayal Energy University, Gandhinagar.
7. Webinar on “Climate Change Vital Signs of Planet” jointly organized by Department of Physics and Chemistry and Mathematics on May 8, 2021 at School of Technology, Pandit Deendayal Energy University, Gandhinagar.
8. Webinar on “Material Science & Engineering – Current trends & future prospects” jointly organized by Department of Physics and Chemistry on May 8, 2021 at School of Technology, Pandit Deendayal Energy University, Gandhinagar.
9. Webinar on "Amazing Earth: Space to Surface” organized jointly by Department of Chemistry, Physics and Mathematics on May 22, 2021 at School of Technology, Pandit Deendayal Energy University, Gandhinagar.
10. Webinar on “Emerging facets of material science” jointly organized by Department of Physics and Chemistry on May 29, 2021 at School of Technology, Pandit Deendayal Energy University, Gandhinagar.
11. Dr. Rama Gaur conducted a National webinar on Intellectual Property Rights and Career Opportunities in IPR to be held on 25th September 2021.
12. Dr. Rama Gaur conducted a Special Session on Career Fair (Career Opportunity for UG/PG/Ph.D. Students) at the '1st International Symposium on Materials of the Millennium: Emerging Trends and Future Prospects (MMETFP 2021)' on 20th November 2021
13. Department of Chemistry, Pandit Deendayal Energy University (PDEU) in collaboration with Metrohm India Ltd. organised a training webinar on Electrochemical workstation and Nova software at 2:30 PM on 9th October, 2021 (Speaker- Mr. Bhavin Koladia, Co-ordinator- Dr. Rama Gaur)
14. Organized A Hands on Workshop on Synthesis of Nanomaterials and Nanocomposites, during 01 Feb – 05 Feb 2022, at Department of Chemistry, School of Technology, Pandit Deendayal Energy University, Gandhinagar, Gujarat

Achievements/Awards

- Awarded with a certificate of appreciation for exceptional contribution as a Primary Evaluator in 'Toycathon,2021'
- Awarded a certificate of appreciation from Dr. Pankaj Borkar, Deputy Controller of Patents & Designs and Head, Rajiv Gandhi National Institute Of Intellectual Property Management, Nagpur-440001, Ministry of Commerce & Industry - Govt. of India (2021)
- Selected among top 20 women scientists by British Council and Coventry University UK in collaboration with Newton Bhabha Fund at Indian Institute of Science Education and Research (IISER) Pune, March 2017.
- Qualified National Eligibility Test (NET-JRF), with All India Rank-38 conducted by the Council of Scientific and Industrial Research, Government of India, June 2012.
- Qualified Central Teacher Eligibility Test (CTET), Central Board of Secondary Education conducted by National Council for Teacher Education (NCTE), Ministry of Human Resource Development, Government of India, June 2011.

Seminars/Lectures & Presentations

- Delivered a talk on "Bioanalytical Techniques" in BRSI sponsored workshop on Prelude to Biotechnology, at IIIT Una, 23 August 2019
- Delivered a talk on "Science and Innovation: PDEU Ways" in a webinar at School of Technology, Pandit Deendayal Energy University, Gandhinagar on 17th April 2021
- Delivered a talk on Mystery of Chemistry during B.Tech Induction Schedule, on 23rd September 2021, at School of Technology, Pandit Deendayal Energy University, Gandhinagar
- Delivered an Invited Talk on "Development of low cost clay based adsorbents for environmental Remediation" in International conference Advanced Materials for Better Tomorrow (AMBT-2021) on 17th July 2021 organized by IIT-BHU
- Oral presentation: "Recent advances in nano-structured transition metal sulfide-based sensors for environmental applications" at the 1st International Conference on Additive Manufacturing and Advanced Materials (AM2-2021) is to be held at Pandit Deendayal Energy University (PDEU) during 4-6 October 2021.
- Poster Presentation: "Facile synthesis of Type II ZnO-CdS nanostructures for applications in waste water treatment" at International Symposium on Materials of the Millennium: Emerging Trends and Future Prospects. Pandit Deendayal Energy University, Gandhinagar during 19-20 November 2021

Conference/workshop/FDP contributions:

1. Participated in the AICTE sponsored Faculty Development Program on “Reverse Engineering” organized by Indian Institute of Technology Mandi, (H.P.) India on 08-12 July 2019.
2. Participated in the AICTE sponsored Faculty Development Program on “Universal Human Values” (Level I &II) organized by Indian Institute of Technology Mandi (Level I) and National Institute of Technology Hamirpur (Level II) on 18-20 January 2019 and 22-28 June 2019.
3. Participated in the INUP Familiarization Workshop on "Nanofabrication Technologies" organized by Centre for Nano Science and Engineering, Indian Institute of Science, Bangalore at IIT Roorkee, India on 27-28 April 2017
4. Participated in the Workshop on Science Journalism (Level I &II) organized by British Council and Coventry University UK in collaboration with Newton Bhabha Fund at Indian Institute of Science Education and Research (IISER) Pune on 5-7 March & 24-25 March 2017.
5. Poster presentation on “A facile route for the synthesis of CdS nanoparticles with different morphologies and their role as visible light photocatalyst for degradation of crystal violet dye”, 18th CRSI National Symposium in Chemistry (CRSI-NSC), organized by Institute of Nano Science and Technology, Mohali at Panjab University, Chandigarh on 5-7 February 2016.
6. Participated in the Workshop on SciFinder, organized by Mahatma Gandhi Central Library, IIT Roorkee, India, 18 March 2015.
7. Participated in the Workshop on Scopus, Mendeley and Reaxys, organized by Mahatma Gandhi Central Library, IIT Roorkee, India, 10 March 2015.
8. Participated in the Workshop on Nano Drug Delivery Systems (Industry-Academia Interaction, organized by Centre of Excellence: Nanotechnology, IIT Roorkee, India, 10 January 2015.
9. Participated in the Workshop on Using Web of Science for Research, organized by Mahatma Gandhi Central Library, IIT Roorkee, India, 27 February 2015.
10. Poster presentation on “Synthesis and characterization of ZnO-CdS core-shell nanohybrids by thermal decomposition method and studies on their charge transfer characteristics”, 5th Interdisciplinary Symposium on Materials Chemistry (ISMC-2014), organized by Chemistry Division and Society for Materials Chemistry (SMC) at BARC Mumbai, 9-13 December 2014.
11. Poster presentation on “Thermal decomposition approach for the synthesis of ZnO-CdS nanocomposites and
12. studies on their optical properties”, 6th International Conference on Nanoscience and Technology (ICONSAT 2014), organized by Institute of Nano Science and Technology, Mohali at Panjab University, Chandigarh on 3-5 March 2014.
13. Oral presentation on “Photoelectrochemical splitting of water for hydrogen generation” in the Annual Technical Festival of IIT Roorkee, Cognizance 2013 organized by Indian Institute of Technology Roorkee, India, March 22–24, 2013.
14. Participated in the International Workshop on Chemical Evolution & Origin of Life, organized by Department of Chemistry, IIT, Roorkee in March 2013.
15. Participated in the Seminar on Recent Trends in Environmental Chemistry, UGC SAP sponsored organized by Department of Chemistry, Dayalbagh Educational Institute, Agra on 10 September 2010.
16. Participated in the conference Chemistry of Phytopotentials, Energy and Environmental Prospective (CEPHEE), organized by Department of Chemistry, Dayalbagh Educational Institute, Agra on 10-13 March 2010.

Collaborations

- Indian Institute of Technology (IIT-BHU), Varanasi, Uttar Pradesh
- Indian Institute of Technology, Gandhinagar, Palaj, Gujarat
- Central University of Gujarat, Gandhinagar, Gujarat
- SRM University, Delhi-NCR campus, Sonipat Haryana

Recognition & Memberships

- Life time member of Society for Materials Chemistry (SMC), Bhabha Atomic Research Centre, Mumbai.
- Associate Member of Royal Society of Chemistry (AMRSC)

Courses Taught

Undergraduate Level

Post Graduate Level

Theory Courses:

- Applied Chemistry
- Engineering Chemistry
- Chemistry II
- Chemical Kinetics and Catalysis
- Chemical Engineering thermodynamics
- Physical Chemistry I & II
- Chemistry for Mechanical Engineers
- Environmental Studies
- Basic Environment Engineering and Science
- Inorganic Chemistry-II

- Analytical Chemistry
- Molecular Dynamics and Reaction Energetics
- Physical and Inorganic Spectroscopy
- Research Methodology
- Paint Pigments & Cosmetics

Lab Courses:

- Applied Chemistry Lab I
- Applied Chemistry Lab II
- Engineering Chemistry Lab
- Inorganic Chemistry Lab-II
- Physical Chemistry Lab-I

- Physical Chemistry Lab
- Inorganic Chemistry Lab

Courses & Labs Developed

- Engineering Chemistry
- Engineering Chemistry Lab

- Basic Environment Engineering and Science

INTERNATIONAL SYMPOSIUM ON MATERIALS OF THE MILLENNIUM:
EMERGING TRENDS AND FUTURE PROSPECTS (MMETFP-2021)

CAREER FAIR
20 November 2021

An excellent networking opportunity with other industry partners, experienced researchers and young minds
The career fair will be held in hybrid mode.

COORDINATORS: DR. RAMA GAUR, DR. NANDINI MUKHERJEE, DR. ANU MANHAS & DR. MEGHA BALHA

For more details visit: <http://sot.pdpu.ac.in/mmetfp.html>



SOT SCHOOL OF TECHNOLOGY

PDEU PANDIT DEENDAYAL ENERGY UNIVERSITY
Formerly Pandit Deendayal Petroleum University (POPU)

ONLINE INTERSCHOOL SCIENCE QUIZ ON NATIONAL SCIENCE DAY
BY DEPT OF PHYSICS, CHEMISTRY & MATHEMATICS, SCHOOL OF TECHNOLOGY

28TH FEBRUARY 2021, SUNDAY
(For 11th and 12th, SCIENCE Stream Students only)

REGISTRATION ENDS 20th February 2021	1st ROUND OF QUIZ 21st February 2021	RESULTS OF 1st ROUND TOP 50 22nd February 2021	FINAL ROUND FOR TOP 50 28th February 2021
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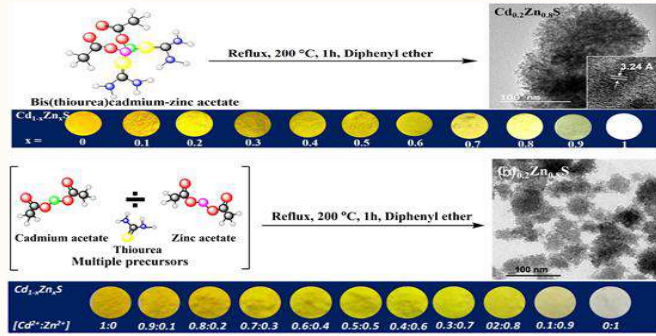
Participation Certificates will be provided

Prize for Top 5 Winners (Crossword Vouchers)

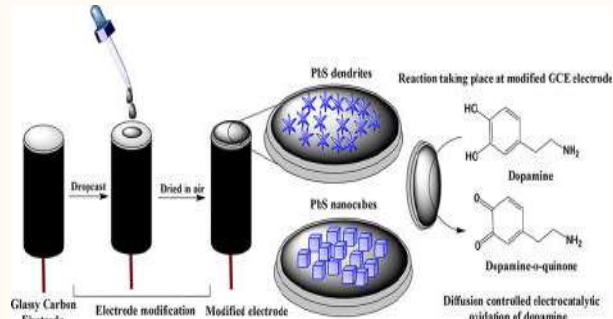
Registration Link



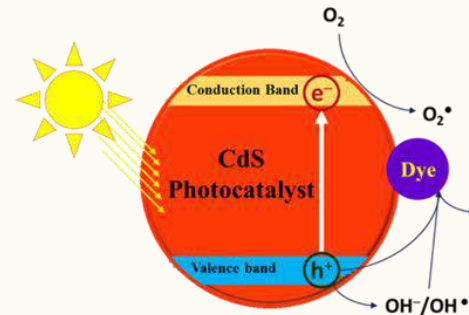
Abstracts



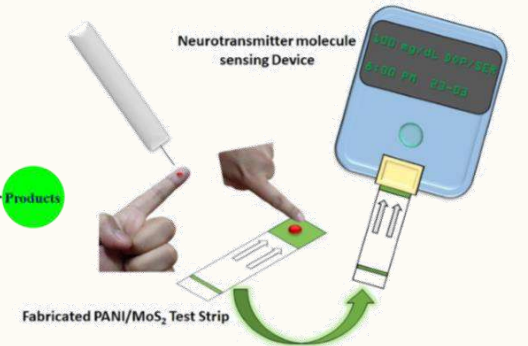
Solid solutions via single molecular precursor approach



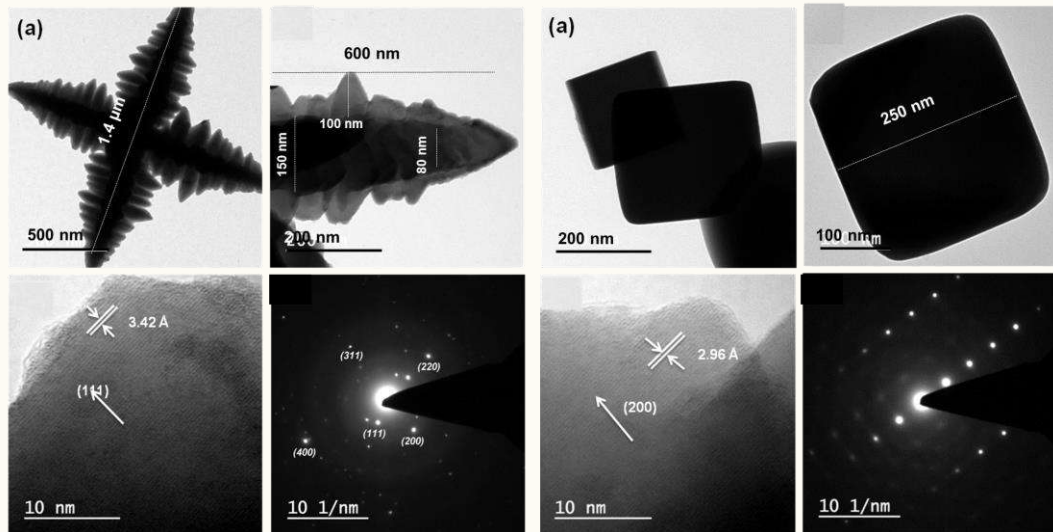
Electrochemical Sensing of Dopamine



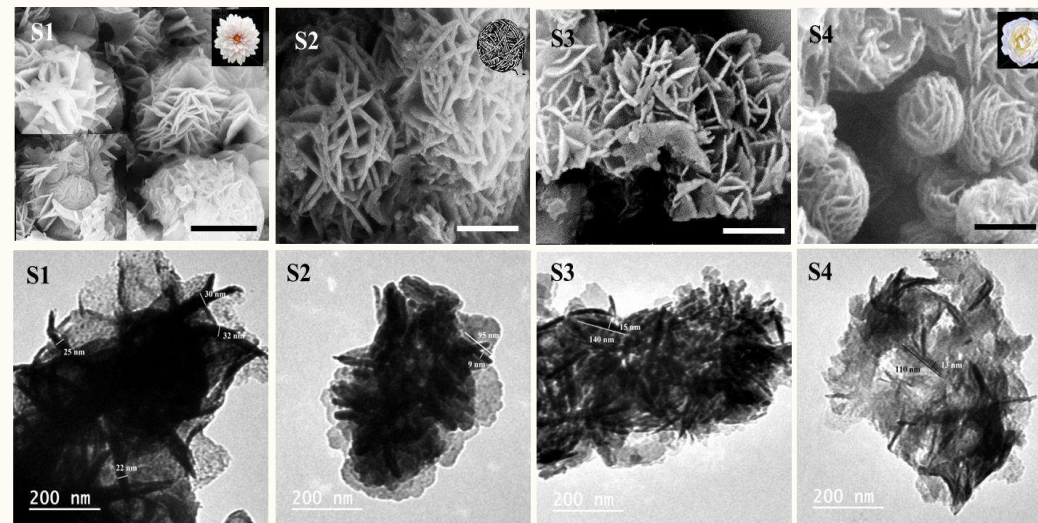
Nanomaterials Assisted photocatalysis



Neurotransmitter molecule sensing device



Size and shape controlled synthesis of nanostructured lead sulfide



Solvent Assisted morphological evolution of Tin sulfide nanoparticles

Activities

