

Principal Investigator (PI)

CURRICULUM VITAE (CV)

Dr. RAJENDRA CHARANDEO PAWAR

Assistant Professor,
Department of Physics,
Central University of Rajasthan, Ajmer, India
Phone: +91 9558779566/95578759569
Email: rajendra.pawar@curaj.ac.in/raju.phy@gmail.com



Research Grants

Sr. No.	Project Title	Role	Reference number	Amount of Grants (INR)	Status
1	Development of Green Syngas (CO/H ₂) technology via solar dry reforming reaction at low temperature	PI	SPARC/2024-2025/ENSU/P3732	48.72 Lakh	On-going (01/04/2024 to 31/03/2026)
2	Dynamic Research Ecosystem for Advanced Materials (DREAMS) ANRF-PAIR-IIT Ropar	Co-PI	ANRF/PAIR/2025/000006/PAIR-A (G)	10.45 Cr	On-going (20/09/2025 to 31/03/2030)

Research/Teaching Credentials

(i)	Assistant Professor, Department of Physics, Central University of Rajasthan, Ajmer, India	06/2023 to present
(ii)	Research Associate Professor, Hanyang University, South Korea	03/2022 to 05/2023
(iii)	President's International Postdoctoral Fellow, Chinese Academy of Sciences (PIFI-CAS), Dalian Institute of Chemical Physics (DICP), China,	06/2018 to 09/2020
(iv)	Assistant Professor (on-contract), Central institute of plastics engineering and technology (CIPET), Ahmadabad	08/2017 to 03/2018
(v)	Research Professor, Hanyang University, South Korea	03/2014 to 07/2017
(vi)	Post-doc fellow, Hanyang University, South Korea	08/2011 to 02/2014

Academic Credentials

(i)	Research Topic: Studies on dye sensitized solar cells based on nanostructured zinc oxide (ZnO) thin films by an aqueous chemical route. Shivaji University, Kolhapur 416 004 India Advisor: Dr. Pramod S. Patil	Ph.D. May 2011
(ii)	Shivaji University, Kolhapur 416 004 India With first class (Specialization – Energy Science)	M. Sc. June 2006

(iii)	Shivaji University, Kolhapur – 416 004, India With first class (Physics, Chemistry, Mathematics and Statistics)	B. Sc. June 2004

Awards:

(i) **Best Poster Award:** International Conference on Advances in Electron Microscopy and Related Techniques (EMSI-2010) and XXXI Annual Meeting of EMSI Organized by Electron Microscope Society of India (EMSI) and Bhabha Atomic Research Centre (BARC), Mumbai. (M.S.) India.

(ii) **Outstanding Poster Award:** 12th Annual Meeting of International Union of Materials Research Societies (IUMRS) - International Conference in Asia (ICA), held in Taipei, Taiwan from 19 to 22, September 2011.

(iii) **Best Researcher Award** for outstanding research achievement during the year 2016, Hanyang University, South Korea, 14 January 2017.

(iv) **Best Presentation Award** International Conference on Energy, Aquatech and Sustainability (ICEAS 2023), Arusha Technical College, Tanzania, August 3, 2023

Books:

(i) Heterogeneous nanocomposites - photocatalysis for water purification

Elsevier: Micro and Nano Technologies Series

ISBN: 978-0-323-39310-2 (2015) (Royalty received >500 USD)

(ii) Zinc oxide thin film: Dye sensitized solar cells, LAMBERT Academic Publishing GmbH & Co. KG, Germany; ISBN: 978-3-659-11656-8 (2012).

Research interest: Photo-thermocatalytic dry reforming reaction (CO₂ and CH₄ conversion), Photocatalytic water splitting and detoxification, and synthesis of energy nanomaterials.

LIST OF PUBLICATIONS (Total 84): h-index: 40, Total citations: 4498

<https://scholar.google.co.in/citations?user=DhhzokgAAAAJ&hl=en>

Sr. No.	Title	Authors	Year	Vol. No.	Page No.	Journal	ISSN	I.F.
1	Synthesis and characterization of highly stable optically passive CeO ₂ -ZrO ₂ counter electrode	A.K. Bhosale, P.S. Shinde, N.L. Tarwal, R.C. Pawar, P.M. Kadam and P.S. Patil	2010	55	1900	Electrochimica Acta	0013-4686	7.3
2	Surfactant assisted low temperature synthesis of nanocrystalline ZnO and its gas sensing properties	R.C. Pawar, J.S. Shaikh, A.V. Moholkar, J.H. Kim, S.S. Suryavanshi and P.S. Patil	2010	151	212	Sensors and Actuators B: Chemical	0925-4005	8.4
3	Polymer assisted deposition of electrochromic tungsten oxide thin films	S.S. Kalagi, D.S. Dalavi, R.C. Pawar, N.L. Tarwal, S.S. Mali and P.S. Patil	2010	492	335	Journal of Alloys and Compounds	0925-8388	6.2
4	Characterization of Zinc Oxide nanoparticles synthesized by polymer assisted deposition	R.C. Pawar, J.S. Shaikh, P.S. Shewale, P.S. Patil	2011	509	1716-1721	Journal of Alloys and Compounds	0925-8388	6.2
5	Aqueous chemical growth	R.C. Pawar, J.S.	2011	85	1119-	Solar Energy	0038-	6.7

	of ZnO disks, rods, spindles and flowers: pH dependency and photoelectrochemical properties	Shaikh, A.A. Babar, P.M. Dhere and P.S. Patil			1127		092X	
6	Dye sensitized solar cell based on zinc oxide bottle brush	R.C. Pawar, J.S. Shaikh, P.S. Shinde and P.S. Patil	2011	65	2235-2237	Materials Letters	0167-577X	3.0
7	Low temperature aqueous chemical synthesis of CdS sensitized ZnO nanorods	S.A. Vanalakar, R.C. Pawar, M.P. Suryawanshi, S.S. Mali, D.S. Dalavi, Y.B. Kown, K.U. Sim, A.V. Moholkar, J. H. Kim, P.S. Patil	2011	65	548-551	Materials Letters	0167-577X	3.0
8	Synthesis and characterization of Ru doped CuO thin films for supercapacitor based on bronsted acidic ionic liquid	J.S. Shaikh, R.C. Pawar, R.S. Devan, Y.R. Ma, P.P. Salvi, S.S. Kolekar and P.S. Patil	2011	56	2127-2134	Electrochimica Acta	0013-4686	7.3
9	ZnO cacti: Optimizing structure	R.C. Pawar, J.S. Shaikh and P.S. Patil	2011	14	447	Materials Today	1369-7021	24.2
10	CuO-polyacrylic acid hybrid films: chemical synthesis and supercapacitor behavior	J.S. Shaikh, R.C. Pawar, A.V. Moholkar, J.H. Kim and P.S. Patil	2011	257	4389-4397	Applied Surface Science	0169-4332	6.7
11	Synthesis of CdS spongy balls with nanoconduits for effective light harvesting	S.A. Vanalakar, S.S. Mali, R.C. Pawar, A.V. Moholkar, J.H. Kim and P.S. Patil	2011	56	2762-2768	Electrochimica Acta	0013-4686	7.3
12	From nanowires to cubes of CdO: ethanol gas response	A. S. Kamble, R. C. Pawar, J. Y. Patil, S. S. Suryavanshi and P. S. Patil	2011	509	1035-1039	Journal of Alloys and Compounds	0925-8388	6.2
13	Supercapacitor behavior of CuO-PAA hybrid films: Effect of PAA concentration	J.S. Shaikh, R.C. Pawar, S.S. Mali, and P.S. Patil	2011	509	7168-7174	Journal of Alloys and Compounds	0925-8388	6.2
14	Photoluminescence of zinc oxide nanopowder synthesized by a combustion method	N.L. Tarwal, P.R. Jadhav, R.C. Pawar, J.S. Shaikh, S.S. Mali and P.S. Patil	2011	208	185-188	Powder Technology	0032-5910	5.2
15	Ethanol sensing properties of chemosynthesized CdO nanowires and nanowalls	A.S. Kamble, R.C. Pawar, N.L. Tarwal, L.D. More and P.S. Patil	2011	65	1488-1491	Materials Letters	0167-577X	3.0
16	Surfactant mediated	R.C. Pawar, J.S.	2012	23	349-	Journal	0957-	2.8

	synthesis of ZnO nanostructures and their dye sensitized solar cells application	Shaikh and P.S. Patil			355	Materials Science: Materials Electronics	4522	
17	Growth of ZnO nanodisks, nanospindles and nanoflowers for gas sensor: pH dependency	R.C. Pawar, J.S. Shaikh, S.S. Suryavanshi and P.S. Patil	2012	12	778-783	Current Applied Physics	1567-1739	2.4
18	Improved field emission and photocatalysis properties of cacti-like zinc oxide nanostructures	R.C. Pawar, Hyung-sub Kim and Caroline S. Lee	2012	68	142-145	Script Materialia	1359-6462	6.0
19	Synthesis of CdS with graphene by CBD (Chemical Bath Deposition): method and its photocatalytic activity	R.C. Pawar, J.Y. Lee, E.J. Kim, H.S. Kim, C.S. Lee	2012	22	504-507	Korean Journal of Materials Research	1225-0562	0.15
20	Effect of annealing on the supercapacitor performance of CuO-PAA/CNT films	J.S. Shaikh, R.C. Pawar, S.S. Mali, A.V. Moholkar, J.H. Kim, and P.S. Patil	2012	16	25-33	Journal of Solid State Electrochemistry	1432-8488	2.5
21	Novel method of fabrication of polyaniline–CdS nanocomposites: Structural, morphological and optoelectronic properties	B.T. Raut, M.A. Chougule, Shashwati Sen, R.C. Pawar, C.S. Lee and V.B. Patil	2012	38	3999-4007	Ceramics International	0272-8842	5.2
22	Polyaniline–CdS nanocomposites: effect of camphor sulfonic acid doping on structural, microstructural, optical and electrical properties	B.T. Raut, M.A. Chougule, A.A. Ghanwat, R.C. Pawar, C.S. Lee, V.B. Patil	2012	23	2104-2109	Journal Materials Science: Materials Electronics	0957-4522	2.8
23	Fabrication of ZnO nanorod-arrays for photoelectrochemical solar cell application via aqueous chemical route	S.A. Vanalakar, S.S. Mali, R.C. Pawar, D.S. Dalavi, A. V. Moholkar, P. S. Patil	2012	38	6461-6467	Ceramics International	0272-8842	5.2
24	Photoelectrochemical properties of CdS sensitized ZnO nanorod arrays: Effect of nanorod length	S.A. Vanalakar, S.S. Mali, R.C. Pawar, N.L. Tarwal, J.H. Kim, P.S. Patil	2012	112	0443-02	Journal of Applied Physics	0021-8979	3.2
25	Synthesis of Multi-dimensional ZnO nanostructures in aqueous medium for the application of gas sensor	R.C. Pawar, Jin-Woong Lee, Vikas B. Patil and Caroline S. Lee	2013	187	323-330	Sensors & Actuators: B. Chemical	0925-4005	8.4
26	Fabrication of nanocomposite photocatalysts from zinc oxide nanostructures and reduced graphene oxide	R.C. Pawar, Dhaneesh Cho and Caroline S. Lee	2013	13	S50-S57	Current Applied Physics	1567-1739	2.4

27	Sensitization of CdS nanoparticles onto reduced graphene oxide (RGO) fabricated by Chemical Bath Deposition (CBD) method for effective removal of Cr(VI)	R.C. Pawar and C.S. Lee	2013	141	686-693	Materials Chemistry and Physics	0254-0584	4.6
28	Aqueous chemical route deposition of nanocrystalline ZnO thin films as acetone sensor: Effect of molarity	A.V. Rajgure, J.Y. Patil, R.C. Pawar, C.S. Lee, S.S. Suryavanshi	2013	39	87-92	Ceramics International	0272-8842	5.2
29	Structural, morphological, and gas response properties of citrate gel synthesized nanocrystalline ZnO and Zn _{0.9} Cd _{0.10} materials	J.Y. Patil, A.V. Rajgure, L.K. Bagal, R.C. Pawar, I.S. Mulla, S.S. Suryavanshi	2013	39	4383-4390	Ceramics International	0272-8842	5.2
30	Nanocrystalline SnO ₂ thin films: Structural, morphological, electrical transport and optical studies	R.D. Sakhare, G.D. Khuspe, R.C. Pawar, C.S. Lee, Shashwati Sen, V.B. Patil	2013	563	300-306	Journal of Alloys and Compounds	0925-8388	6.2
31	Nanostructured SnO ₂ thin films for NO ₂ gas sensing applications	G.D. Khuspe, R.D. Sakhare, S.T. Navale, R.C. Pawar, C.S. Lee, V.B. Patil	2013	39	8673-8679	Ceramics International	0272-8842	5.2
32	Dielectric properties of sol-gel synthesized SrTiO ₃ /(Ba _{0.7} Sr _{0.3})TiO ₃ /Ba(Zr _{0.3} Ti _{0.7})O ₃ thin film heterostructures	A.N. Tarale, M.M. Sutar, D.J. R.C. Pawar, S.C. Lee, M. Gupta, R.J. Chaudhary	2013	24	1308-1318	Journal of Materials Science: Materials Electronics	0957-4522	2.8
33	Single-step sensitization of reduced graphene oxide sheets and CdS nanoparticles on ZnO nanorods as visible-light photocatalysts	R.C. Pawar and C.S. Lee	2014	144	57-65	Applied Catalysis B: Environmental	0926-3373	22.1
34	Defect-controlled growth of ZnO nanostructures using its different zinc precursors and their application for effective photodegradation	Rajendra C. Pawar, Hyungsub Kim and C.S. Lee	2014	14	621-629	Current Applied Physics	1567-1739	2.4
35	Ternary nano-heterojunction of graphitic carbon nitride/cadmium sulfide/reduced graphene oxide (g-C ₃ N ₄ /CdS/RGO) composites for superior photodegradation of organic pollutants under visible-light	Rajendra C. Pawar, Caroline S. Lee and Varsha Khare <u>One of the HOT Dalton Transactions article in July 2014</u>	2014	43	1251 4-1252 7	Dalton Transactions	1477-9226	4.0
36	Gas sensing performance of hydrothermally grown CeO ₂ -ZnO composites	A.V. Rajgure, N.L. Tarwal, J.Y. Patil, R.C.	2014	40	5837-5842	Ceramics International	0272-8842	5.2

		Pawar, C.S. Lee, S.S. Suryavanshi						
37	Facile and novel route for preparation of nanostructured polyaniline (PANi) thin films	D.K. Bandgar, G.D. Khuspe, R.C. Pawar, C.S. Lee and V.B. Patil	2014	4	27-36	Applied Nanoscience	2190-5517	3.8
38	Synthesis, characterization and LPG response of Pd loaded Fe doped tin oxide thick films	L.P. Chikhale, J.Y. Patil, A.V. Rajgure, R.C. Pawar, I.S. Mulla, S.S. Suryavanshi	2014	608	133-140	Journal of Alloys and Compounds	0925-8388	6.2
39	Magnetocapacitance and impedance spectroscopy of Ba _{0.7} Sr _{0.3} TiO ₃ /La _{0.67} Sr _{0.33} MnO ₃ and Ba _{0.8} Sr _{0.2} TiO ₃ /La _{0.67} Sr _{0.33} MnO ₃ thin film heterostructures	A.N. Tarale, P.B. Joshi, S.B. Kulkarni, V.R. Reddy, M. Gupta, R.C. Pawar and C. S. Lee	2014	70	346-354	Journal of Sol-Gel Science and Technology	0928-0707	2.5
40	Polypyrrole–NiO hybrid nanocomposite films: highly selective, sensitive, and reproducible NO ₂ sensors	S.R. Nalage, A.T. Mane, R.C. Pawar, C.S. Lee and V.B. Patil	2014	20	1-10	Ionics	0947-7047	2.8
41	Study of effect of planetary ball milling on ZnO nanopowder synthesized by co-precipitation	K.P. Shinde, R.C. Pawar, B.B. Sinha, H.S. Kim, S.S. Oh, K.C. Chung	2014	617	404-407	Journal of Alloys and Compounds	0925-8388	6.2
42	Optical and magnetic properties of Ni doped ZnO planetary ball milled nanopowder synthesized by co-precipitation	K.P. Shinde, R.C. Pawar, B.B. Sinha, H.S. Kim, S.S. Oh and K.C. Chung	2014	40	1679-9-1680-4	Ceramics International	0272-8842	5.2
43	Simple coating method of carbonaceous film onto copper nanopowder using PVP as solid carbon source	Danee Cho, Dahyun Choi, Rajendra C. Pawar, Sanggeun Lee, E.H. Yoon, T.Y. Lee and Caroline S. Lee	2014	148	859-867	Materials Chemistry and Physics	0254-0584	4.6
44	Microstructural, optical and electrical transport properties of WO ₃ nanoparticles coated polypyrrole hybrid nanocomposites	A.T. Mane, S.T. Navale, R.C. Pawar, C.S. Lee, V.B. Patil	2015	199	187-195	Synthetic Metals	0379-6779	4.4
45	Reduced graphene oxide composites with MWCNTs and single-crystalline hematite nanorhomboheda for applications in water purification	Rajendra C. Pawar, Da-Hyun Choi and Caroline S. Lee	2015	40	767-778	International Journal of Hydrogen Energy	0360-3199	7.2
46	Formation of polar surfaces in microstructured ZnO by doping with Cu and applications in	Rajendra C. Pawar, Da-Hyun Choi, Jai-Sung Lee and Caroline S. Lee	2015	151	167-180	Materials Chemistry and Physics	0254-0584	4.6

	photocatalysis using visible light							
47	Role of TiO ₂ nanoparticles in the dry deposition of NiO micro-sized particles at room temperature	H. Kim, S. Yang, R.C. Pawar, S. H. Ahn, C. S. Lee	2015	41	5937-5944	Ceramics International	0272-8842	5.2
48	Gold nanoparticle modified graphitic carbon nitride/multi-walled carbon nanotube (g-C ₃ N ₄ /CNTs/Au) hybrid photocatalysts for effective water splitting and degradation	Rajendra C. Pawar, Suhee Kang, Sung Hoon Ahn, and Caroline S. Lee	2015	5	2428 1-2429 2	RSC Advances	2046-2069	3.9
49	Photoelectrochemical properties and photodegradation of organic pollutants using hematite hybrids modified by gold nanoparticles and graphitic carbon nitride	Rajendra C. Pawar, Youngjun Pyo Sung Hoon Ahn and Caroline S. Lee	2015	176	654-666	Applied Catalysis B: Environmental	0926-3373	22.1
50	Dielectric characteristics of a barium titanate film deposited by Nano Particle Deposition System (NPDS)	Seungkyu Yang, Hyungsub Kim, Rajendra C. Pawar, Sung-Hoon Ahn, and Caroline S. Lee	2015	16	1029-1034	International Journal of Precision Engineering and Manufacturing	2234-7593	1.9
51	Integration of ZnO with g-C ₃ N ₄ structures in core-shell approach via sintering process for rapid detoxification of water under visible irradiation	Rajendra C. Pawar, Yeonho Son, Jongryul Kim, Sung Hoon Ahn, and Caroline S. Lee	2016	16	101-108	Current Applied Physics	1567-1739	2.4
52	Size-controlled BiOCl-RGO composites having enhanced photodegradative properties	Suhee Kang, Rajendra C. Pawar, Youngjun Pyo, V. Khare & Caroline S. Lee	2016	11	259-275	Journal of Experimental Nanoscience	1745-8080	2.8
53	Decoration of Au nanoparticles onto BiOCl sheets for enhanced photocatalytic performance under visible irradiation for the degradation of RhB dye	Suhee Kang, Rajendra C. Pawar & Caroline S. Lee	2016	11	853-871	Journal of Experimental Nanoscience	1745-8080	2.8
54	Stable and magnetically reusable nanoporous magnetite micro/nanospheres for rapid extraction of carcinogenic contaminants from water	Rajendra C. Pawar, Taejoon Park, Dahyun Choi, Kwang-won Jeon, Sung-Hoon Ahn and Caroline S. Lee	2016	6	3429 7-3431 1	RSC Advances	2046-2069	3.9
55	Oxidation prevention properties of reduced graphene oxide mixed with 1-octanethiol-coated copper nanopowder composites	Danee Cho, Dahyun Choi, Youngjun Pyo, Rajendra C. Pawar, Yongil Kim, Eric H. Yoon, and Caroline S. Lee	2016	ID 105 018 3	8 pages	Journal of Nanomaterials	1687-4110	3.7
56	Photocatalytic evaluation	Yunchan Park,	2016	181	241-	Materials	0254-	4.6

	of self-assembled porous network structure of ferric oxide film fabricated by dry deposition process	Hyungsub Kim, Geon-Yong Lee, Rajendra C. Pawar, Jai-Sung Lee, Caroline S. Lee			247	Chemistry and Physics	0584	
57	Room-temperature synthesis of nanoporous 1D microrods of graphitic carbon nitride (g- C ₃ N ₄) with highly enhanced photocatalytic activity and stability	Rajendra C. Pawar, Suhee Kang, Jung Hyun Park, Jong-ho Kim, Sunghoon Ahn & Caroline S. Lee	2016	6	3114 7	Scientific Reports	2045-2322	4.9
58	Minimization of Recombination Losses in 3D Nanostructured TiO ₂ Coated with Few Layered g-C ₃ N ₄ for Extended Photo-response	Suhee Kang, Rajendra C. Pawar, Tae Joon Park, JinGeum Kim, Sung-HoonAhn, and Caroline S. Lee	2016	53	393-399	Journal of the Korean Ceramic Society	1229-7801	2.5
59	Ultra-thin coating of g- C ₃ N ₄ on an aligned ZnO nanorod film for rapid charge separation and improved photodegradation performance	Tae Joon Park, Rajendra C. Pawar, Suhee Kang and Caroline S. Lee	2016	6	8994 4-8995 2	RSC Advances	2046-2069	3.9
60	Improved efficiency of dye-sensitized solar cell based on randomly ordered pore structure fabricated by dry deposition method	Hyungsub Kim, Yomin Choi, Yunchan Park, Rajendra C. Pawar, Yong-Ho Choa, Caroline S. Lee	2017	17	433-441	Current Applied Physics	1567-1739	2.4
61	Evaluation of multi-dimensional hybrid photocatalyst for enrichment of H ₂ evolution and elimination of dye/non-dye pollutants	Rajendra Pawar, Suhee Kang, Jung Hyun Park, Jong-Ho Kim, Sung-Hoon Ahn and Caroline S. Lee	2017	7	2579-2590	Catalysis Science & Technology	2044-4753	5.0
62	Solvent-polarity-induced hematite (α -Fe ₂ O ₃) nanostructures for lithium-ion battery and photoelectrochemical applications	Rajendra C. Pawar, Ji Hyun Um, Suhee Kang, Won-Sub Yoon, Heeman Choe, and Caroline S. Lee	2017	245	643-653	Electrochimica Acta	0013-4686	7.3
63	Few layered metallic 1T-MoS ₂ /TiO ₂ with exposed (001) facets: Two-dimensional nanocomposites for enhanced photocatalytic activities	Hyuksu Han, KangminKim, Chan-Woo Lee, Caroline S. Lee, Rajendra Pawar, Jacob L. Jones and Sungwook Mhin	2017	19	2820 7-2821 5	Physical Chemistry Chemical Physics	1463-9076	3.3
64	Photocatalytic evaluation of ATO/TiO ₂ heterojunction films fabricated by a nanoparticle deposition	Yunchan Park, Hyungsub Kim, Rajendra C. Pawar, Suhee Kang, Caroline	2018	203	118-124	Materials Chemistry and Physics	0254-0584	4.6

	system	S. Lee						
65	MWCNT incorporated silica aerogel prepared by ambient pressure drying: A recyclable catalyst for multicomponent synthesis of benzylpyrazolyl coumarin at room temperature	Isak Rajjak Shaikh, N. N. Maldar, C. S. Lee, R. C. Pawar, H. H. Park, Uzma Bangi	2018	6	19-29	Iranian Chemical Communication	2423-4958	0.2
66	Electrospun one-dimensional graphitic carbon nitride-coated carbon hybrid nanofibers (GCN/CNFs) for photoelectrochemical applications	Joonyoung Jang, Suhee Kang, Rajendra C. Pawar, Caroline S. Lee	2018	18	1006-1012	Current Applied Physics	1567-1739	2.4
67	Direct coating of a g-C ₃ N ₄ layer onto one-dimensional TiO ₂ nanocluster/nanorod films for photoactive applications	Suhee Kang, Joonyoung Jang, Rajendra C. Pawar, Sunghoon Ahn and Caroline S. Lee	2018	47	7237-7244	Dalton Transactions	1477-9226	4.0
68	Low temperature fabrication of Fe ₂ O ₃ nanorod film coated with ultra-thin g-C ₃ N ₄ for a direct z-scheme exerting photocatalytic activities	Suhee Kang, Joonyoung Jang, Rajendra C. Pawar, Sung-Hoon Ahn and Caroline Sunyong Lee	2018	8	33600-33613	RSC Advances	2046-2069	3.9
69	In situ reduction and exfoliation of g-C ₃ N ₄ nanosheets with copious active sites via a thermal approach for effective water splitting	Rajendra C. Pawar, Suhee Kang, Hyuksu Han, Heechae Choi and Caroline S. Lee	2019	9	1004-1012	Catalysis Science and Technology	2044-4753	5.0
70	Influence of glycerol additive on the chemical structure, hydrophobicity, morphology and optical properties of sol-gel based zirconia coatings	Uzma KH Bangi, Rabiya S Gafari, Rajendra C Pawar, Hyung-Ho Park	2020	10	16-21	ES Materials & Manufacturing	2578-0611	
71	Influence of Various Sol-Gel Parameters on the Physico-Chemical Properties of Sulfuric Acid Chelated Zirconia Aerogels Dried at Ambient Pressure	Uzma KH Bangi, Bhushan Patil, Rajendra C Pawar, Hyung-Ho Park	2020	393	2000025	Macromolecular Symposia	1521-3900	
72	Study of multi-faceted CoS ₂ introduced graphene aerogel hybrids via chemical approach for an effective electrocatalytic water splitting	Rajendra C. Pawar, Suhee Kang, Haritham Khan, Hyuksu Han, Caroline S Lee	2021	32	78-85	Current Applied Physics	1567-1739	2.4
73	Hierarchical framework of CoZnS as a high-performance electrode material for supercapacitors	G.T.Chavana, A. Sikora, R.C.Pawar, J.Warycha, P.J.Morankar, Chan-Wook Jeon	2023	49 (1)	282-293	Ceramics International	0272-8842	5.2

74	Photocatalyst Engineering for Water-Based CO ₂ Reduction Under Visible Light Irradiation to Enhance CO Selectivity: A Review of Recent Advances	Hazina Charles, Rajendra C Pawar, Haritham Khan, Caroline S. Lee	2023	1	https://doi.org/10.1007/s40684-023-00511-w	International Journal of Precision Engineering and Manufacturing -Green Technology	2198-0810	4.6
75	Double-sided growth of MoSe ₂ nanosheets onto hollow zinc stannate (ZnO, ZnSnO ₃ , and SnO ₂) nanofibers (h-ZTO) for efficient CO ₂ photoreduction	Hazina Charles, Rajendra C. Pawar, Haritham Khan, Plassidius J Chengula, Caroline S. Lee	2023	11	1099 17	Journal of Environmental Chemical Engineering	2213-3437	7.7
76	One-pot synthesis of octahedral NiSe ₂ as a co-catalyst for enhanced CO ₂ photoreduction performance	Haritham Khan, Rajendra C. Pawar, Hazina Charles, Plassidius Joachim Changula, Caroline S. Lee	2023	629	1573 62	Applied Surface Science	1873-5584	6.7
77	Growth of 3D nanowall-like structures of FeVO ₄ by controlling reaction rate for effective CO ₂ reduction using UV-visible light	Rajendra C. Pawar, Haritham Khan, Hazina Charles, Caroline S. Lee	2023	11	1102 36	Journal of Environmental Chemical Engineering	2213-3437	7.7
78	Cu-doped TiO ₂ nanofibers coated with 1T MoSe ₂ nanosheets providing a conductive pathway for the electron separation in CO ₂ photoreduction	Haritham Khan, Rajendra C. Pawar, Hazina Charles, Caroline Sunyong Lee	2023	636	1578 32	Applied Surface Science	1873-5584	6.7
79	Synergistic effect of surface modification and effective interfacial charge transfer over faceted g-C ₃ N ₄ /ZnSe heterojunction to enhance CO ₂ photoreduction activity	Hazina Charles, Plassidius Joachim Changula, Rajendra C. Pawar, Haritham Khan, Sohyang Kim and Caroline S. Lee	2023	56	1043 07	Journal of Water Process Engineering	2214-7144	7
80	Boosting photocatalytic CO ₂ conversion using strongly bonded Cu/reduced Nb ₂ O ₅ nanosheets	Rajendra C Pawar, Plassidius J Chengula, Haritham Khan, Hazina Charles, Caroline S Lee	2023	52	1283 2-1284 4	Dalton Transactions	1477-9234	4
81	Exploring the comparison of optical, dielectric and photocatalytic performance of Yb ³⁺ and Gd ³⁺ half-doped DyCrO ₃ nanostructures	Manjeet Rani, Rajendra C. Pawar, Neeraj Panwar	2024	314	1288 48	Materials Chemistry and Physics	1879-3312	4.6
82	Current trends on dry photocatalytic oxidation technology for BTX	Plassidius Joachim Changula,	2024	351	1411 97	Chemosphere	1879-1298	8.8

	removal: Viable light sources and highly efficient photocatalysts	Hazina Charles, Rajendra C. Pawar and Caroline S. Lee						
83	Outstanding improvement in ultraviolet photodetection with DyCrO ₃ /n-Si heterojunction device on manganese substitution	Manjeet Rani, Kuldeep Singh, Rajendra C. Pawar and Neeraj Panwar	2025	36	12	Journal Materials Science: Materials Electronics	798	2.8
84	Swift heavy ion irradiation effects on the electrical and photonic properties of ZnO/p-Si heterojunction	Rekha Rani, H. Chourasiya, J. Gellanki, Renu Kumari, Rajendra Pawar and Sandeep Kumar	2026	EMID: a58daee524132cda		Applied Physics A	Accepted on 09/01/2026	

B) Presentations at National/International Conferences/ Meetings (Total 21):

Sr. No.	Name of Author/s	Year	Title of Paper	Name of symposia / conference
1	R.C. Pawar , J.S. Shaikh, P.M. Dhere, A.A. Babar, P.S. Patil [Award Winner Poster]	March 8-11, 2010	Secondary Growth of ZnO at low temperature for solar cells application	EMSI-2010 and XXXI Annual Meeting of EMSI Organized by EMSI and BARC, Mumbai. (M.S.) India
2	R.C. Pawar , J.S. Shaikh, P.M. Dhere, A.A. Babar, P.S. Patil	March 19-20, 2010	Growth of Hierarchical Nanorods for dye sensitized solar cells	National Seminar on Advanced Materials –2010 at Dept. of Physics, Shivaji University, Kolhapur (M.S.) India
3	R.C. Pawar , J.S. Shaikh and P.S. Patil	Dec. 06-10, 2010	Growth of Hierarchical ZnO Nanorods for Dye Sensitized Solar Cells	Winter School at International Centre for Material Science, JNCASR India and Cambridge University, UK.
4	R.C. Pawar , J.S. Shaikh, J.K. Patil, More A.K. Bhosale and P.S. Patil	Dec. 15-16, 2010	Surfactant mediated growth of ZnO nanostructures and its gas sensing properties	National Conference on Recent Trends in Harnessing of Non-conventional Energy Resources (RTNCER) at Vivekanand College, Kolhapur.
5	R.C. Pawar , A.S. Kamble, M. L. Karanjakar, P.M. Kadam and P.S. Patil	Dec. 15-16, 2010	Synthesis of 1-D nanostructures of ZnO and CdO for gas sensor applications	RTNCER at Vivekanand College, Kolhapur.
6	R. C. Pawar , Jin-Woong Lee, Vikas B. Patil, Caroline S. Lee	May, 20-23, 2012	Growth of Cacti-like ZnO nanostructure from aqueous medium for gas sensor application	IMCS 2012-14 th International Meeting on Chemical sensors Nuremberg, Germany
7	R. C. Pawar , Hyungsub Kim and Caroline S. Lee	September, 17-19, 2012	Fabrication of reduced graphene oxide and zinc oxide nanocomposites	International Conference on Electronic Materials and Nanotechnology for Green

			using sintering method for Superior photocatalysis	Environment (ENGE-2012), Jeju, South Korea
8	Rajendra C. Pawar , Da-Hyun Choi and Caroline S. Lee	February, 19-21, 2014	Fabrication of cubic shaped hematite (Fe ₂ O ₃) and reduced graphene oxide (RGO) composites for effective photodegradation of organic pollutants	International Conference on Nanotechnology, Nanomaterials & Thin Films for Energy Applications, University College London, UK
9	Rajendra C. Pawar and Caroline S. Lee	June, 14-19, 2015	Self-assembled growth of porous micro/nanospheres of hematite (Fe ₂ O ₃) for effective removal of carcinogenic elements	11 th International Conference on Ceramic Materials and Components for Energy and Environmental Applications, Hyatt Regency, Vancouver, BC Canada.
10	Rajendra C. Pawar and Can Li, Young Speaker during the International	July 28-30, 2021	Photocatalytic CO ₂ reduction into hydrocarbon fuels	e-Conference on Polymer and Nanocomposites which was held virtually on Organized by Engineering Sciences (ES) Publisher USA.
11	Rajendra C. Pawar and Can Li Invited Talk	Nov. 21 – 24, 2023	Green syngas (CO/H ₂) production via dry reforming route using photothermal catalyst	Advanced Materials Synthesis, Characterization and Applications 2023 (AMSCA 2023), Department of Physics, Savitribai Phule Pune University (SPPU), Pune, India
12	Rajendra C. Pawar and Neeraj Panwar Resource person	Dec. 11-15, 2023	Distinctive Photocatalysts for Green Energy Technology	Faculty Development Program on The Impact of Emerging Technologies on Society, Mahila Engineering College, Ajmer, Rajasthan

PARTICULARS OF OTHER ACTIVITIES:

Worked as organizing member of following activities at Shivaji University,

1. International conference on Nanomaterials and Applications (ICNAMA-2008), during 9 – 11 Dec. 2008, Department of Physics, Shivaji University, Kolhapur
2. Coordinator for Viksit Bharat@20247 program during 11 - 20 Dec. 2023, School of Physical Sciences, Central University of Rajasthan, India

I hereby declare that all the information given above is correct to the best of my knowledge.

Date-13-Jan-26

Dr. Rajendra C. Pawar