Recent Publications:

S. No.	*Author(s)*	*Year*	*Title*	*Complete Reference of Journal*
1.	Anil Kumar, P. P. Sahay	2021	Lithium doping in spray-pyrolyzed NiO thin films: Results on their microstructural, optical and electrochromic properties	Applied Physics A Vol. 127, p. 286 (17 pp). DOI: 10.1007/s00339-021-04436-6
2.	P. P. Sahay	2021	Galvanostatically deposited Co_3O_4–NiO nanocomposite thin films onto FTO glass substrates: An investigation of their microstructural and supercapacitive properties	Journal of Alloys and Compounds, Vol. 867, p. 159022 (9 pp). DOI: 10.1016/j.jallcom.2021.159022
3.	Aradhana Tiwari, P. P. Sahay	2020	The effects of Sn–In co-doping on the structural, optical, photoluminescence and electrical characteristics of the sol-gel processed ZnO thin films	Optical Materials, Vol. 110, p. 110395 (9 pp). DOI: 10. 1016/ j. optmat. 2020. 110395
4.	Aradhana Tiwari, P. P. Sahay	2020	Sn-Ga co-doping in sol-gel derived ZnO thin films: studies of their microstructural, optical, luminescence and electrical properties	Materials Science in Semiconductor Processing, Vol. 118, p. 105178 (9 pp). DOI: 10.1016/j.mssp.2020. 105178
5.	Anil Kumar, P. P. Sahay	2020	Influence of Ti doping on the microstructural and electrochromic properties of dip-coated nanocrystalline V_2O_5 thin films	Journal of Sol-Gel Science and Technology, Vol. 95, pp. 34-51. DOI: 10.1007/s10971-020-05298-9
6.	Rajesh K. Mishra Rohit R. Shahi Amit Raj Singh P. P. Sahay	2020	Synthesis, characterizations, and magnetic properties of FeCoNiTi-based high-entropy alloys	Emergent Materials, Vol. 3, pp. 655-662. DOI: 10.1007/s42247-020-00110-4 :
7.	Anil Kumar, P. P. Sahay	2019	Microstructural, optical and electrochromical properties of W-doped Nb_2O_5 thin films prepared by dip-coating process using sols obtained by the chloroalkoxide route	Journal of Materials Science: Materials in Electronics, Vol. 30, pp.17999–18014. DOI: 10.1007/s10854-019-02153-8
8.	Anil Kumar, Chandra Shekhar Prajapati P. P. Sahay	2019	Results on the microstructural, optical and electrochromic properties of spray-deposited MoO_3 thin films by the influence of W doping	Materials Science in Semiconductor Processing Vol. 104, 104668 (12 pp). DOI: 10.1016/j.mssp.2019. 104668
9.	Anil Kumar, Chandra Shekhar Prajapati P. P. Sahay	2019	Modification in the microstructural and electrochromic properties of spray-pyrolysed WO_3 thin films upon Mo doping	Journal of Sol-Gel Science and Technology, Vol. 90, pp.281-295. DOI: 10.1007/s10971-019-04960-1
10.	Rajesh K. Mishra, P. P. Sahay, Rohit R. Shahi	2018	Alloying, magnetic and corrosion behavior of AlCrFeMnNiTi high entropy alloy	Journal of Materials Science, Vol. 749, pp.172-179. doi.org/10.1007/s10853-018-

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11.	Rajesh Kumar Mishra, Chandra Shekhar Prajapati, P.P. Sahay	2018	Supercapacitive performance of electrochemically synthesized nanocrystalline MnO_2 films using different plating solutions: A comparative study	Journal of Alloys and Compounds, Vol. 749, pp.172-179. DOI: 10.1016/j.jallcom.2018.03.271
12.	R.K. Mishra, C.S. Prajapati, R.R. Shahi, A.K. Kushwaha, P.P. Sahay	2018	Influence of electrodeposition modes on the electrochemical performance of MnO_2 films prepared using anionic MnO_4^- (Mn^{7+}) precursor	Ceramics International, Vol. 44, pp. 5710–5718. DOI: 10.1016/j.ceramint.2017.12.224
13.	P.P. Sahay	2017	Multifunctional metal oxide nanomaterials for chemical gas sensing	Procedia Engineering, Vol. 215, pp. 145-151. DOI: 10.1016/j.proeng.2017.11.003
14.	Rajneesh Kumar Mishra, G. Murali, Tae-Hyung Kim, Jee Hun Kim, Young Jin Lim, Byoung-Suhk Kim, P. P. Sahay, SeungHee Lee	2017	Nanocube In_2O_3@RGO heterostructure based gas sensor for acetone and formaldehyde detection	RSC Advances, Vol. 7, pp. 38714-38724. DOI: 10.1039/c7ra05685k
15.	P.P. Sahay, Ajay Kumar Kushwaha	2017	Electrochemical supercapacitive performance of potentiostatically cathodic electrodeposited nanostructured MnO_2 films	Journal of Solid State Electrochemistry, Vol. 21, pp. 2393-2405. DOI: 10.1007/s10008-017-3574-7
16.	S.B. Upadhyay, R.K. Mishra, P.P. Sahay	2016	Cr-doped WO_3 nanosheets: structural, optical and formaldehyde sensing properties	Ceramics International, Vol. 42, pp. 15301-15310. DOI: 10.1016/j.ceramint.2016.06.170
17.	Ramnayan Mukherjee, P.P. Sahay	2016	Improved electrochromic performance in sprayed WO3 thin films upon Sb doping	Journal of Alloys and Compounds, Vol. 660, pp. 336-341. DOI: 10.1016/j.jallcom.2015.11.138
18.	S.B. Upadhyay, P.P. Sahay	2015	Structure, optical and formaldehyde sensing properties of co-precipitated Fe-doped WO_3 nanomaterials	NANO: Brief Reports and Reviews, Vol. 10, pp. 1550113 (12 pages) DOI: 10.1142/S1793292015501131
19.	R. K. Mishra, S. B. Upadhyay, Ajay Kushwaha, Tae-Hyung Kim, G. Murali,	2015	SnO_2 quantum dots decorated on RGO: a superior sensitive, selective and reproducible performance for a H_2 and LPG sensor	Nanoscale, Vol. 209, pp. 368-376. DOI: 10.1039/c5nr02837j

	Ranjana Verma, Manish Srivastava, Jay Singh, P. P. Sahay, SeungHee Lee			
20.	Ramnayan Mukherjee, P.P. Sahay	2015	Effect of precursors on the microstructural, optical, electrical and electrochromic properties of WO_3 nanocrystalline thin films	Journal of Materials Science: Materials in Electronics, Vol. 26, pp. 6293-6305. DOI: 10.1007/s10854-015-3216-8
21.	Ramnayan Mukherjee, P.P. Sahay	2015	Structural, morphological, optical and electrical properties of spray-deposited Sb-doped WO3 nanocrystalline thin films prepared using ammonium tungstate precursor	Journal of Materials Science: Materials in Electronics, Vol. 26, pp. 2697-2708. DOI: 10.1007/s10854-015-2745-5
22.	S.B. Upadhyay, R.K. Mishra, P.P. Sahay	2015	Enhanced acetone response in co-precipitated WO_3 nanostructures upon indium doping	Sensors and Actuators B-Chemical, Vol. 209, pp. 368-376. DOI:10.1016/j.snb.2014.11.138
23.	R. K. Mishra, Ajay Kushwaha, P.P. Sahay	2014	Cr induced modifications in the structural, photoluminescence and acetone sensing behaviour of hydrothermally synthesized SnO_2 nanoparticles	Journal of Experimental Nanoscience, Vol. 10, pp. 1042-1056. DOI: 10.1080/17458080.2014.952685.
24.	Ramnayan Mukherjee, C.S. Prajapati, P.P. Sahay	2014	Tin-incorporation induced changes in the microstructural, optical and electrical behaviour of tungsten oxide nanocrystalline thin films grown via spray pyrolysis	Journal of Thermal Spray Technology, Vol. 23, pp. 1445-1455. DOI: 10.1007/s11666-014-0134-x
25.	Ramnayan Mukherjee, C.S. Prajapati, P.P. Sahay	2014	Tailoring the microstructural, optical and electrical properties of nanocrystalline WO_3 thin films using Al doping	Journal of Materials Engineering and Performance, Vol. 23, pp. 3141-3151. DOI: 10.1007/s11665-014-1094-5
26.	R. K. Mishra, Ajay Kushwaha, P.P. Sahay	2014	Influence of Cu doping on the structural, photoluminescence and formaldehyde sensing properties of SnO_2 nanoparticles	RSC Advances, Vol. 4, pp. 3904-3912. DOI:10.1039/C3RA43709D
27.	S.B. Upadhyay, R.K. Mishra, P.P. Sahay	2014	Structural and alcohol response characteristics of Sn-doped WO_3 nanosheets	Sensors and Actuators B-Chemical, Vol. 193, pp. 19-27. DOI: 10.1016/j.snb.2013.11.049
28.	Ramnayan Mukherjee, Ajay Kushwaha, P.P. Sahay	2014	Spray-deposited nanocrystalline WO_3 thin films prepared using tungsten hexachloride dissolved in N-N dimethylformamide and influence of In doping on their structural, optical and electrical properties	Electronic Materials Letters, Vol. 10, pp. 401-410. DOI: 10.1007/s13391-013-3221-0

29.	K.K. Verma, R. K. Sinha, P. P. Sahay	2013	Structural, optical and ethanol gas-sensing properties of zinc oxide thin film prepared by spray pyrolysis technique using ultrasonic nebuliser	Indian Journal of Pure & Applied Physics, Vol. 51, pp. 765-768.
30.	R.K. Mishra, S.B. Upadhyay, P.P. Sahay	2013	Volatile organic compounds (VOCs) response characteristics of the hydrothermally synthesized SnO_2 nanocapsules	Sensor Letters, Vol. 11, pp. 1611-1616. DOI:10.1166/sl.2013.3020
31.	C. S.Prajapati, Ajay Kushwaha, P. P. Sahay	2013	Experimental investigation of spray-deposited Fe-doped ZnO nanoparticle thin films: Structural, microstructural and optical properties	Journal of Thermal Spray Technology, Vol. 22, pp. 1230-1241. DOI: 10.1007/s11666-013-9973-0
32.	C. S.Prajapati, Ajay Kushwaha, P. P. Sahay	2013	Effect of Al dopants on the structural, optical and gas sensing properties of spray-deposited ZnO thin films	Materials Chemistry and Physics, Vol. 142, pp. 276-285. DOI:10.1016/j.matchemphys.2013.07.015
33.	R. K. Mishra, Shiv K. Pandey, P. P. Sahay	2013	Influence of In doping on the structural, photo-luminescence and alcohol response characteristics of the SnO2 nano particles	Materials Research Bulletin, Vol. 48, pp. 4196-4205. DOI:10.1016/j.materresbull.2013.06.071
34.	N. G. Pramod, S. N. Pandey, P.P. Sahay	2013	Sn-doped In_2O_3 nanocrystalline thin films deposited by spray pyrolysis: microstructural, optical, electrical and formaldehyde sensing characteristics	Journal of Thermal Spray Technology, Vol. 22, pp. 1035-1043. DOI: 10.1007/s11666-013-9933-8
35.	C.S. Prajapati, Ajay Kushwaha, P.P. Sahay	2013	Influence of Fe doping on the structural, optical and acetone sensing properties of sprayed ZnO thin films	Materials Research Bulletin, Vol. 48, pp. 2687-2695. DOI:http://dx.doi.org./10.1016/j.materresbull. 2013.03.026
36.	C.S. Prajapati, Ajay Kushwaha, P.P. Sahay	2013	Optoelectronics and formaldehyde sensing properties of tin-doped ZnO thin films	Applied Physics A, Vol. 113, pp. 651-662. DOI 10.1007/s00339-013-7589-3
37.	C.S. Prajapati, P.P. Sahay	2013	Influence of In doping on the structural, optical and acetone sensing properties of ZnO nanoparticulate thin films	Materials Science in Semiconductor Processing, Vol. 16, pp. 200-210. doi:http://dx.doi.org/10.1016/j.mssp.2012.04.015
38.	P.P. Sahay, R.K. Mishra, S.N. Pandey, S. Jha, M. Shamsuddin	2013	Structural, dielectric and photoluminescence properties of co-precipitated Zn-doped SnO_2 nanoparticles	Current Applied Physics, Vol. 13, pp. 479-486. DOI:http;//dx.doi.org/10.1016/j.cap.2012.09.010