

Brief Biodata

Name: Dr Jai S Tawale

Designation:	Technical Officer	
DP No. and Name:	In-house BND Group # 5.01	
DU No. and Name:	Indian Reference Materials # 5.0	
Email:	tawalejst@nplindia.org	
Date of Joining CSIR-NPL:	23/08/2007	
Phone (office)	011 45608261	
Mobile (optional)		

Research Area/ Interest

Metal oxide nanomaterials
Electron Microscopy
Humidity sensors

Educational Qualifications

(Please write latest qualification first)

Degree	Subject	University/ Institute	Year
Ph.D	Physics	NIT, Kurukshetra, Haryana	2018
M.Sc	Physics	RTMNU, Maharashtra	2006
B.Sc	Physics, Maths, Electronics	RTMNU, Maharashtra	2004

Academic / Research Experience

Grade / Post	Institute	Duration		Research Field
		From	To	
Technical Officer	CSIR-NPL, New Delhi	23/08/2014	Till date	Electron Microscopy, Reference materials, Metal oxide nanomaterials
Technical Assistant	CSIR-NPL, New Delhi	23/08/2007	23/08/2014	Electron Microscopy
Process Associate	Sterlite Industries, Aurangabad, Maharashtra	15/11/2006	16/08/2007	

No. of Publications

No. of Publications in SCI Journals	No. of Publications in non-SCI Journals	No. of Publications in Conference Proceedings	Books	Total
28	-	15	2	45

Selected Publications

- 1) Microstructural evolution and photoluminescence performance of nickel and chromium doped ZnO nanostructures
J.S. Tawale, Ashavani Kumar, G. Swati, D. Haranath, S.J. Dhoble, A.K. Srivastava, Materials Chemistry and Physics 205 (2018) 9-15.
- 2) Facile synthesis of bulk SnO₂ and ZnO tetrapod based graphene nanocomposites for optical and sensing application
J.S. Tawale, Ashavani Kumar, S.R. Dhakate, A.K. Srivastava
Materials Chemistry and Physics 201 (2017) 372-383
- 3) Growth of thermally evaporated SnO₂ nanostructures for optical and humidity sensing application
Jai S. Tawale, Gaurav Gupta, Anand Mohan, Ashavani Kumar, Avanish K. Srivastava
Sensors and Actuators B 201 (2014) 369–377.
- 4) Influence of silver and graphite on zinc oxide nanostructures for optical application
J.S. Tawale, A. Kumar, A. Mohan, A.K. Srivastava
Optical Materials 35 (2013) 1335–1341
- 5) Modification at Lattice Scale for an Optimized Optical Response of Al_x(ZnO)_{1-x} Nanostructures
Avanish Kumar Srivastava, Karuppanan Senthil, Melepurath Deepa, Ruchi Gakhar, Jai Shankar Tawale, World Journal of Nano Science and Engineering, 1 (2011) 15-19.
- 6) Synthesis and characterization of ZnO tetrapods for optical and antibacterial applications
J.S. Tawale, K.K. Dey, R. Pasricha, K.N. Sood, A.K. Srivastava
Thin Solid Films 519 (2010) 1244–1247.
- 7) Revelation of temperature dependent cathodoluminescence by employing nanostructural path way in Fe incorporated ZnO
J.S. Tawale, H. Nishido, S. Toyoda, M. Deepa, N. Bahadur, M. Maniraj, S. R. Barman, B.R. Chakraborty, and A.K. Srivastava, Advances in nanodevices and nanofabrication, Pan Stanford Publishing (2012).

Patents

- 1) Process for the development of activated carbon from waste biomass jute sticks
The invention is the result of the consultancy project (CNP 170132)
S.R. Dhakate, Bhanu Pratap Singh, Kiran Subhedar, R.K. Seth, Shaveta Sharma, Jagdish Ghawana, Shailesh Kumar Yadav, Nahar Singh, Jai Tawale, M. Arvind Kumar, Ajay Dhar and D.K. Aswal
- 2) Water and organic solvent base intrinsic and composite metals nanoparticles formulations useful for the preparation of water based sanitizer and coating on porous and nonporous surface to inhibit microbial growth and process for the preparation therefore. " The invention is the result of the Project under code No. CNP-200232.
Nahar Singh, Rajesh, S. Swarupa Tripathy, V. Ezhilselvi, Jyoti Pokhriyal, Jai Shankar Tawale, Deepak Joishar, Vishwas Joshi, Sushant Kumar Chanda and Shilpa Nair

Current Activities

(Not more than 100 words)

Electron Microscopy, Reference materials, Metal Oxide Nanomaterials

Honour(s)/Award(s)/ Fellowship(s)

Technology Award 2017 for successful contribution in development of “ **Process technology of activated carbon from waste jute stick biomass**” for improving socio-economic status of jute growing farmer in north eastern states.

Contributions to AcSIR

SEM and EDS techniques for characterization of materials as a part of coursework in curriculum of Ph.D students registered in AcSIR.

Membership of Professional Societies/ Institutions

- 1) Life Membership of Electron Microscopy Society of India, 2009
- 2) Life Membership of Vijnana Bharati, 2017

Any other Information

(Not more than 100 words)