


Brief Biodata

Name: Dr. Kriti Tyagi

Designation:	Scientist	
DP No. and Name:	4.03 Advanced Carbon Products and Metrology Section	
DU No. and Name:	4 Advanced Materials and Devices Metrology Division	
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Date of Joining CSIR-NPL:	12.02.2018	
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Research Area/ Interest

Material Science, Thermoelectrics

Educational Qualifications

(Please write latest qualification first)

Degree	Subject	University/ Institute	Year
Ph.D.	Physical Sciences	Academy of Scientific and Industrial Research (AcSIR)	2016
M. Tech.	Nanotechnology	GGSIPIU, Dwarka, Delhi	2011

Academic / Research Experience

Grade / Post	Institute	Duration		Research Field
		From	To	
National Post-Doctoral Fellow SERB	University of Delhi	September 2016	Feb 2018	Material Science
CSIR-SRF	CSIR-NPL	2014	2016	Material Science
CSIR-SPF	CSIR-NPL	2012	2014	Material Science

No. of Publications

No. of Publications in SCI Journals	No. of Publications in non-SCI Journals	No. of Publications in Conference Proceedings	Book Chapter	Total
20	--	01	01	22

Selected Publications

Sl. No	Title	Author	Year	Journal name
1	Role of sintering temperature on electronic and mechanical properties of thermoelectric material: A theoretical and experimental study of TiCoSb half-Heusler alloy	A.K. Verma, K. K Johari, Kriti Tyagi , D. K. Sharma, Pawan Kumar, Sudhir Kumar, S. Bathulka, S. R. Dhakate, Bhasker Gahtori	2022	Material Chemistry and Physics, 281, 125854
2	Defect engineering for enhancement in thermoelectric performance of (Zr, Hf)NiSn based n-type half-Heusler alloys	N. S. Chauhan, Parul R. Raghuvanshi, K. Tyagi , K. K. Johari, B. Gahtori, Sivaiah B., A. Bhattacharya, S. D. Mahanti, L. Tyagi, V. Singh, Y. V. Kolen'ko and A. Dhar	2020	The Journal of Physical Chemistry , 124, 8584
3	Tin doped Cu ₃ SbSe ₄ : A stable thermoelectric analogue for the mid-temperature applications	Ruchi Bhardwaj, Amrita Bhattacharya, Kriti Tyagi , Bhasker Gahtori, N. S. Chauhan, S. Bathula, Sushil Auluck and Ajay Dhar	2019	Materials Research Bulletin , 113, 38.
4	Electrical transport and mechanical properties of thermoelectric tin selenide	Kriti Tyagi , Bhasker Gahtori, Sivaiah Bathula, Niraj Kumar Singh, S. Auluck and Ajay Dhar	2016	RSC Advances , 6, 11562
5	Giant enhancement in thermoelectric performance of copper selenide by incorporation of different nanoscale dimensional defect features	Bhasker Gahtori, Sivaiah Bathula, Kriti Tyagi , M. Jayasimhadri, A. K. Srivastava, Sukhvir Singh, R. C. Budhani, Ajay dhar	2015	Nano Energy , 13, 36-46
6	Thermoelectric properties of Cu ₃ SbSe ₃ with intrinsically ultra-low lattice thermal conductivity	Kriti Tyagi , Bhasker Gahtori, Sivaiah Bathula, A. K. Srivastava, A. K. Shukla, S. Auluck, Ajay Dhar	2014	J. Mater. Chem. A , 2, 15829-15835

Patents

S. No.	Patent Title	Name of applicant(s)	Patent No.	Granted	Country
1.	Nanostructured copper-selenide with high thermoelectric figure-of-merit and process for the preparation thereof	Bhasker Gahtori, Sivaiah Bathula, Kriti Tyagi , Avanish Kumar Srivastava, Ajay Dhar, Ramesh Chandra Budhani	US9865791B2	09.01.2018	USA
2.	Nanostructured copper-selenide with high thermoelectric figure-of-merit and process for the preparation thereof	Bhasker Gahtori, Sivaiah Bathula, Kriti Tyagi , Avanish Kumar Srivastava, Ajay Dhar, Ramesh Chandra Budhani	2693/DEL/2013 Dt: 10-07-2015	Application Published	India
3.	Nanostructured copper-selenide with high thermoelectric figure-of-merit and process for the preparation thereof	Bhasker Gahtori, Sivaiah Bathula, Kriti Tyagi , Avanish Kumar Srivastava, Ajay Dhar, Ramesh Chandra Budhani	CN105765748B	24-07-2018	China

Current Activities

(Not more than 100 words)

1. Development of efficient thermoelectric materials for green energy generation.
2. CSIR mission mode “Bulk Chemicals” emphasizing towards synthesis and characterization of coal tar pitch based carbon fibres.

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

2017	DST Travel Grant
2016	SERB – National Post-Doctoral Fellow
2015	Summer Intern, Michigan Technological University, Houghton, MI, USA.
2015	Best Poster Award, National Science Day Celebrations held at CSIR-NPL, New Delhi on March 3, 2015.
2014	CSIR – Senior Research Fellow
2013	Best Poster Award, National Conference (TAPSUN) held at CECRI-CLRI, Chennai, INDIA, September 13-14, 2013.
2012	Best Poster Award, <i>National Conference on Material Science (NCMS)</i> held at DAV College, Jalandhar, India, March 2-3, 2012.
2010	Outstanding student of Institute Award
2009	Graduate Aptitude Test in Engineering (GATE) QUALIFIED; All India Rank-190

Contributions to AcSIR

Supervising M.Sc. Trainee- 6 months

Membership of Professional Societies/ Institutions

2018 – present Member, Metrological Society of India.

Any other Information

(Not more than 100 words)

Foreign Visits:

1. April 2015: MRS- Spring held at Moscone West Convention Centre, California, USA.
2. May 2015 – July 2015: Michigan Technological University, Houghton, MI, USA.
3. May 2017: E-MRS Spring Meeting 2017 held at Strasbourg Convention Centre, France.