Profile of Dr. Suman Kumari

1 Name : Dr. Suman Kumari

2 Designation : Assistant Professor

3 Department : Chemistry

4 Research Profile :

Ph.D. Thesis title : A Study on Impact of Halide Treatment on Cd-Based Thin Films for Solar Cells Correlation with Grain Growth

Date of Registration : May 8, 2019

Thesis status : Awarded on November 30, 2022.

5 Educational Qualification:

Level	Name of University	Year	Marks
Secondary	Board of Secondary Education, Rajasthan	2002	86.85 %
Senior Secondary	Board of Secondary Education, Rajasthan	2004	85.50 %
B.Sc.	Universty of Rajasthan, Jaipur	2007	87.88 %
B.Ed.	Universty of Rajasthan, Jaipur	2008	79 %
M.Sc.	Universty of Rajasthan, Jaipur	2010	70 %
NET,JRF	CSIR, Dehli	December, 2009	AIR-132
GATE	IIT, Guwahati	February, 2010	AIR -493

6 Teaching/Research Experience:

UG	71months	**PG**	35months	**Research**	-

7 Academic Courses Attended

- A Microsoft office specialist (MOS) Training, from November 19, 2018 to 23 November, 2018, organized by Govt. Bangor College, Pali and sponsored by Microsoft India Pvt. Ltd.
- Attended short term training program (STTP) on Advanced Research Methodology (online mode) from May 11, 2020 to 15 May, 2020 organized by REST society for research international, Krishnagiri, Tamil nadu.
- Attended short term training program (STTP) on Statistical Analysis for Research (online mode) from May 18, 2020 to 22 May, 2020 organized by REST society for research international, Krishnagiri, Tamil nadu
- Attended faculty developed program (E-FDP) & management development programme (MDP) on Research Methodology: Tools and techniques from May 29, 2020 to May 31, 2020 organized by Inspira Research Association (IRA) and LBSPG College, Jaipur.
- Participated in the Seven days faculty development programme on intellectual benchmarking of best practices organized by 10 parameter institute of India from 8th June to 14th June 2020.
- Attended the online short term course on "Research scholars' week: Applied Science and Humanities" organized by National Institute of Technology Kurukshetra under TEQIP-III: Twinning system with Engineering College, Bikaner during 23-27 September 2020.
- Attended Gyan Ganga Program: state level online short term training program (1-6 Feb 2021) organized by Comm. College Education, Rajasthan and Chemistry Department, Govt. College, Kota, Rajasthan.
- Attended UGC Sponsored Refresher Course from March 03, 2021 to March 16, 2021, organized by UGC, HRDC, University of Jammu, Jammu.
- Attended One Day Workshop on Intellectual Property Rights Patent, Design, Trademark, Copyright & Geographical Indication (IPR-2022) held organized by Department of Chemistry, University College of Science, Mohanlal Sukhadia University, Udaipur, Rajasthan in Association with CGPDTM, Ministry of Commerce and Industry, Government of India on February 22, 2022.
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8 Seminar/Conference attended:

- Attended "International Virtual Conference on Frontiers in Chemical Sciences (IVCFCS-2021) organized by Department of Chemistry, MLSU, Udaipur, Rajasthan, India on 25th June, 2021.
- Presented a research paper via poster presentation in **"65th DAE Solid State Physics Symposium"** Organized by: Bhabha Atomic research centre, Mumbai Sponsored by: Board of research in nuclear sciences (BRNS) Department of Atomic Energy, Government of India, during 15th - 19th December 2021.
- Presented a research paper via poster presentation in **"58th Annual Convention of Chemists, 2021 & International Conference** on "Recent Trends in Chemical Sciences (RTCS-2021)" organized by the Indian Chemical Society, Kolkata during December 21st - 24th, 2021.
- Presented a research paper in **"International Conference on Renewable Energy" organized by Centre for Non-Conventional Energy Resources (CNCER), University of Rajasthan**, Jaipur, India in Association with International Association for Hydrogen Energy (IAHE),USA & MRSI, Rajasthan Chapter, during February 25th - 27th, 2022.
- Presented a research paper via poster presentation in **"66th DAE Solid State Physics Symposium"** Organized by: Bhabha Atomic Research Centre, Mumbai, Sponsored by: Board of Research in Nuclear Sciences, Department of Atomic Energy Government of India, during December 18-22, 2022 at Birla Institute of Technology Mesra, Ranchi, Jharkhand.
- Attended a national conference on emerging technologies in chemistry and their applications **(NCETCA-23),** during October, 19-20, 2023, Organized by Government PG College Sirohi, Sponsored by DST & SERB, India

9. Research Publications:

S.N.	Title of Paper	Name of authors	Name of the journal	Year of publication	ISSN number of Journal	DOI link
1.	Impact of post MgI_2 treatment on properties of CdS films for solar cells	S. Kumari, D. Suthar,S.L. Patel, Himanshu, N. Kumari and M.S. Dhaka	Proceedings of the 65thDAE SSPS	2021	81-8372-085-4	http://daessps.in/pdf.js-gh-pages/web/viewer.html?file=%2F../ssps2021/DAE%20SSPS%20Proceedings%202021.pdf
2.	Understanding the grain	Suman Kumari, D.	Optical	2022	1873-1252	https://doi.org/

	growth mechanism in CdS thin films by $CdCl_2$ treatment and thermal annealing evolution	Suthar, Himanshu, M.D. Kannan, N. Kumari and M.S. Dhaka	Materials			10.1016/j.optmat.2021.111900
3.	An approach towards CdI_2 treatment on CdSe absorber layer for solar cells	Suman Kumari, D. Suthar, G. Chasta, Himanshu, N. Kumari and M.S. Dhaka	Chemical Physics Letters	2022	1873-4448	https://doi.org/10.1016/j.cplett.2022.139868
4.	Grain growth in thermally evaporated CdS thin films: An approach to MgF_2 activation for window layer applications	Suman Kumari, D. Suthar, Himanshu, M.D. Kannan, N. Kumari and M.S. Dhaka	Inorganic Chemistry Communications	2022	1879-0259	https://doi.org/10.1016/j.inoche.2022.109893
5.	Activation of thermally evaporated CdSe films employing different halides: an evolution to ion size impact on grain growth	Suman Kumari, S. Chuhadiya, D. Suthar, Himanshu, M.D. Kannan, N. Kumari, M.S. Dhaka	Journal of Materials Science: Materials in Electronics	2022	1573-482X	https://doi.org/10.1007/s10853-022-07797-2
6.	Understanding Grain Growth Mechanism in Vacuum Evaporated CdTe Thin Films by Different Halide Treatments: An Evolution of Ion Size Impact on Physical Properties for Solar Cell Applications	Suman Kumari, D. Suthar, Himanshu, N. Kumari and M.S. Dhaka	Comments on Inorganic Chemistry	2022	1548-9574	https://doi.org/10.1080/02603594.2022.2142938
7.	Influence of Air Annealing Temperature on MgI_2 Activation to CdSe Thin Films	Suman Kumari, D. Suthar, Himanshu, N. Kumari, M.S. Dhaka	Journal of Electronic Materials	2022	0361-5235	https://doi.org/10.1007/s11664-022-09998-6
8.	Influence of air annealing temperature on physical properties of MgF_2 - treated CdSe thin films: phase transition and grain growth	Suman Kumari, G. Chasta, Himanshu, N. Kumari, M.S. and Dhaka	Phase Transitions	2022	10290338	https://doi.org/10.1080/01411594.2022.2153048
9.	Phase transition correlated grain growth in CdSe thin films: Annealing evolution to cadmium chloride activation	Suman Kumari, G. Chasta, R. Sharma, N. Kumari and M.S. Dhaka	Physica B: Condensed Matter	2023	0921-4526	https://doi.org/10.1016/j.physb.2022.414422
10.	Annealing evolution to	Suman Kumari, G.	Journal of	2023	1573-482X	https://doi.or

	$MgCl_2$ treated CdSe absorber layers for solar cells	Chasta, Himanshu, N. Kumari and M. S. Dhaka	Materials Science: Materials in Electronics			g/10.1007/s10854-023-10775-2
11.	Towards halide treatment on CdS thin films for solar cell applications: An evolution to ion size impact on segregation and grain boundaries passivation	Suman Kumari, D. Suthar, Himanshu, M.D. Kannan, N. Kumari and M.S. Dhaka	Journal of Alloys and Compounds	2023		https://doi.org/10.1016/j.jallcom.2023.170593
12.	Exploring the impact of different annealing conditions on physical properties of CdSeTe thin films for solar cell absorber layer applications	S Kumari, P. Dadheech, Himanshu and M.S. Dhaka	Inorganic Chemistry Communications	2024	1879-0259	https://doi.org/10.1016/j.inoche.2023.111779
13.	An Evolution on MgI_2 Activation Temperature to CdTe Films for Solar Cells	S. Kumari, Himanshu, N. Kumari and M.S. Dhaka	AIP Conf. Proc.	2024	1551-7616	https://doi.org/10.1063/5.0178119

Link of Google Scholar:
https://scholar.google.com/citations?user=WsEgyDMAAAAJ&hl=en&oi=ao