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Alkesh B. Patel, M.Phil, Ph.D (P.) Physics

Career Objectives: Highly energetic and committed professional with strong academic and research background in modern and innovative techniques seeks to provide top quality knowledge

Work Experience

September 2016- Till Date (4.4 Years) **Lecturer (Teaching Assistantship)**
Emp.ID: 3074/9004/9030
Department of Paramedical Sciences
Charotar Institute of Paramedical Sciences
Charotar University of Science & Technology, Changa- Anand

The basic teaching role in the Paramedical Sciences being a basic science individual is to take care of all Physics Studies in Medical Science Domain whether it's Optometry for Physical or Geometrical Physics, or Medical Imaging Technology in Radiation and Basic Physics or In Operation Theatre department for Instrumental Physics. Apart from core paramedical Sciences other jobs is to take care of Physics subjects in Physiotherapy and Nursing Sciences.

Research Publications:

1. **Patel, Alkesh B**; Machhi, Hiren K; Chauhan, Payal; Narayan, Som; Dixit, Vijay; Soni, Saurabh S; Jha, Prafulla K; Solanki, Gunvant K; Patel, Kireetkumar D; Pathak, Vivek M;
Electrophoretically deposited MoSe₂/WSe₂ heterojunction from ultrasonically exfoliated nanocrystals for enhanced electrochemical photoresponse, ACS applied materials & interfaces, 2019, 11, 4093-4102.
2. **Patel, Alkesh B**; Chauhan, Payal; Patel, Kunjal; Sumesh, Challappally Kesav; Narayan, Som; Patel, Kireetkumar D; Solanki, Gunvant K; Pathak, Vivek M; Jha, Prafulla K; Patel, Vikas;
Solution-Processed Uniform MoSe₂-WSe₂ Heterojunction Thin Film on Silicon Substrate for Superior and Tunable Photodetection, ACS Sustainable Chemistry & Engineering, 2020, 8, 4809-4817.
3. **Patel, Alkesh B**; Chauhan, Payal; Machhi, Hiren K; Narayan, Som; Sumesh, CK; Patel, KD; Soni, Saurabh S; Jha, PK; Solanki, GK; Pathak, VM;
Transferrable thin film of ultrasonically exfoliated MoSe₂ nanocrystals for efficient visible-light photodetector, Physica E: Low-dimensional Systems and Nanostructures, 2020, 119, 114019.
4. Chauhan, Payal; Solanki, GK; **Patel, Alkesh B**; Patel, Kunjal; Pataniya, Pratik; Narayan, Som; Patel, KD; Jha, PK; Pathak, VM;

- Tunable and anisotropic photoresponse of layered $\text{Re}_{0.2}\text{Sn}_{0.8}\text{Se}_2$ ternary alloy, *Solar Energy Materials and Solar Cells*, 2019, 200, 109936.
5. Chauhan, Payal; **Patel, Alkesh B**; Solanki, GK; Patel, KD; Pathak, VM; Sumesh, CK; Narayan, Som; Jha, Prafulla K;
Rhenium substitutional doping for enhanced photoresponse of n- SnSe_2 /p-Si heterojunction based tunable and high-performance visible-light photodetector, *Applied Surface Science*, 2020, 536, 147739.
 6. Chauhan, Payal; **Patel, Alkesh B**; Narayan, Som; Prasad, Jyoti; Sumesh, CK; Solanki, GK; Patel, KD; Soni, Saurabh S; Jha, PK; Pathak, VM;
Superior Electrochemical Activity of CdSe Thin Film by Chromium Substitutional Doping, *Journal of Alloys and Compounds*, 2020, 158016.
 7. Chauhan, Payal; **Patel, Alkesh B**; Patel, Kunjal; Patel, Anand; Solanki, GK; Patel, KD; Pathak, VM;
Investigation of anisotropic photoresponse in $\text{Re}_{0.2}\text{Sn}_{0.8}\text{Se}_2$ ternary alloy at low temperature conditions, *Journal of Materials Science: Materials in Electronics*, 2020, 31, 11123-11130.
 8. Patel, Kunjal; Chauhan, Payal; **Patel, Alkesh B**; Solanki, Gunvant K; Patel, Kireetkumar D; Pathak, Vivek M;
Orthorhombic SnSe Nanocrystals for Visible-Light Photodetectors *ACS Applied Nano Materials*, 2020, 3, 11143-11151.
 9. Dixit, Vijay; Nair, Salil; Joy, Jolly; Vyas, CU; **Patel, Alkesh B**; Chauhan, Payal; Sumesh, CK; Narayan, Som; Jha, PK; Solanki, GK;
Growth and application of WSe_2 single crystal synthesized by DVT in thin film hetero-junction photodetector, *The European Physical Journal B*, 2019, 92, 118.
 10. Dixit, Vijay; Chauhan, Payal; **Patel, Alkesh B**; Narayan, Som; Jha, PK; Solanki, GK; Patel, KD; Pathak, VM;
Growth and application of $\text{Sb}_{0.5}\text{Mo}_{0.5}\text{Se}_2$ ternary alloy as photodetector *Materials Letters: X*, 2019, 2, 100013.

Educational Qualifications:

2017- Till Date	Doctor of Philosophy- Physics (Pursuing) Department of Physics, Sardar Patel University.
2015-2016	Master of Philosophy- (Physics) Department of Physics, Sardar Patel University
2013-2015	Master of Sciences- Physics Department of Physics, Sardar Patel University
2009-2012	Bachelors of Science- Physics Gujarat University

Official Administrative Roles:

2016- Till Date	E- Governance Coordinator for CIPS, CHARUSAT
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2016- Till Date **Senior Examination Supervisor- Coordination to COE**

2016- Till Date **Coordinator- Central Council**

Technical Skills:

Hardware Thin film coating units (thermal evaporation unit, spin coater, dip coater, electrodeposition), Electrochemical workstation and standard measurement units for electrochemical characterization.

Software Origin for data analysis, powder X, Lab tracer.

Skills & Activities:

<i>Interests</i>	Indoor	Table Tennis, Cards, Cooking
	Outdoor	Cricket, Trekking, Travelling
<i>Languages</i>	English	Full Working Proficiency (International Language)
<i>Known</i>	Hindi	Bilingual Working Proficiency (National Language)
	Gujarati	Native Working Proficiency (Mother Tongue)

Conferences, Workshops, Proceedings: (Latest*)

1. **A Two Days National Conference on Stem (Science, Technology, Engineering and Mathematics), G H Patel College of Engineering & Technology, Vallabh Vidyanagar, India, September 27-28, 2019.**

Oral Presentation: Electrophoretically deposited MoSe₂/WSe₂ heterojunction from ultrasonically exfoliated nanocrystals for enhanced electrochemical photoresponse.

2. **National Conference on Physics and Chemistry of Materials 14th - 16th December, 2020, Indore – India Department of Physics, Govt. Holkar Science College, Indore**

Oral Presentation: Solution-Processed Uniform MoSe₂-WSe₂ Heterojunction Thin Film on Silicon Substrate for Superior and Tunable Photodetection


Personal Details:

<i>Name</i>	Alkesh Bhikhabhai Patel
<i>Father's Name</i>	Shri Bhikhabhai Patel
<i>DOB</i>	28 th April 1992
<i>Marital Status</i>	Married
<i>Spouse Name</i>	Payal Chauhan Patel
<i>Citizen Passport</i>	-N.A.-
<i>Permanent Address</i>	D/401-Parimal Point, Near Vijay Part BRTS Bus Stop- NH 7, Krishnanagar, Ahmedabad-382346, Gujarat- India

- ✓ I hereby declare that the information given herewith are correct to my knowledge
- ✓ Reference, recommendations and testimonials can be provided on request.

Date: 23/12/2020

Place: Changa, Gujarat



(Signature)