

Profile

Name: Dr. Yugal Khajuria

Designation: Assistant Professor

Department: Physics

Email ID: yugal@smvdu.ac.in

Contact Number and Extn.: 9419633717 and 2505, 2508, 2790

Qualification: Ph.D.

Experience: 17 yrs after P. hD

Teaching: 12 yrs

Research: 17 yrs

Administration: 10

Total: 17



Areas of Interest / Specialization:

1.....Spectroscopy

2.....Collision Physics

Research Profile

Publications : 27 (SCI-Index Journals)

Participation in Seminars/Conferences/Workshops : 25

Papers Presented in Conferences/Seminars : 25

M.Sc Projects Guidance : 12

Ph.D. Guidance: : 02(Submitted) and 01 ongoing

Affiliations/Subscriptions

- a) Laser and Spectroscopy society of India-Life member
- b) The Indian Association of Physics Teachers(IAPT)- Life Member
- c) Indian Society of Atomic and Molecular Physics -Life member

Fellowships awarded

Chinese Academic of Science, Beijing, China

Research Skills

1. Spectroscopic studies of organic and bio-organic molecules
2. Collision studies of atoms, ions and molecules with electrons (Theoretically and Experimentally)

Research Profile

Research Projects Undertaken:

S. No.	Role	Title	Funding Agency	Current Status (Closed/ Running)
1.	PI	Electron Impact single ionization of atoms	CSIR	(2010-2013) Closed
2.	PI	Collision Processes in atomic and Molecular Physics	DST	2012-2015 (Closed)

Research Publications SCI-Index Journals:

S. No.	Year	Publication
1	1998	1 Y. Khajuria and D. N. Tripathi, Evolution of e--He (e, 2e) triple differential cross section at 64.6 eV with different geometries <i>J. Phys. B: At. Mol. Opt. Phys</i> 1998, 31 2359
2	1999	1 Y. Khajuria and D. N. Tripathi, Geometry effects on the (e, 2e) triple differential cross section of Li ⁺ , Na ⁺ and K ⁺ ions, <i>Phys. Rev. A</i> , 1999, 59 1197 2 Y. Khajuria and D. N. Tripathi, Modified semiclassical exchange approximation in the electron atom collision: He (e, 2e) triple differential cross section, <i>Phys. Lett. A</i> 1999, 260 360
3	2001	1 X. J. Chen, C. C. Jia, C. Xu, Y. Khajuria and K. Z. Xu, Experimental and calculated momentum densities for outer valance orbitals of Chlorotrifluoromethane <i>J. Phys. B: At. Mol. Opt. Phys</i> 2001 34 4845
4	2002	1 Y. Khajuria , L. Q. Chen, X. J. Chen and K. Z. Xu, (e, 2e) Triple differential cross section of ionic targets in coplanar to perpendicular

		<p>plane geometry <i>J. Phys. B: At. Mol. Opt. Phys</i> 2002, 35 93</p> <p>2 Y. Khajuria L. Q. Chen, X. J. Chen and K. Z. Xu, Triple differential cross sections of Helium and Argon at 64.6 eV 65 Phys. Rev. A 2002, 042706</p>
5	2003	<p>1 L. Q. Chen, Y. Khajuria, X. J. Chen and K. Z. Xu, Triple differential cross section of Ne(2s) in the coplanar and perpendicular plane geometry <i>Eur. Phys. J. D</i> 2003, 26 141</p> <p>2 Y. Khajuria, M. Takahashi and Y. Udagawa, Electron momentum spectroscopy of N₂O, <i>J. Electron. Spectrosc. and Relat. Phenom</i> 2003, 133 113</p> <p>3 M. Takahashi, Y. Khajuria and Y. Udagawa, (e, 2e) ionization-excitation of H₂. <i>Phys. Rev. A</i> 2003 68 042710</p>
6	2004	<p>1 M. Takahashi, N. Watanabe, Y. Khajuria, K. Nakayama, Y. Udagawa, J. H.D. Eland, Observation of molecular frame (e,2e) cross section using an electron-electron-fragment ion triple coincidence apparatus. <i>J. Electron. Spectrosc. and Relat. Phenom</i> 2004, 141 83</p>
7	2005	<p>1 N. Watanabe, Y. Khajuria, M. Takahashi, Y. Udagawa, Electron momentum spectroscopy of Ne. <i>J. Electron. Spectrosc. and Relat. Phenom</i> 2005, 142 325.</p> <p>2 M. Takahashi, N. Watanabe, Y. Khajuria, Y. Udagawa, J. H.D Eland. Observation of molecular frame (e,2e) cross section: An (e,2e +M) triple coincidence study on H₂. <i>Phys. Rev. Lett.</i> 2005. 94 213202</p> <p>3 N. Watanabe, Y. Khajuria, M.Takahashi, Y.Udagawa, P.S.Vinitzsky, Yu. V Popov, O. Chuluumbaatar, and K.A. Kouzakov, (e,2e) and (e 3-1e) studies on double processes of He at large momentum transfer. <i>Phys. Rev. A</i> 2005 72 032705.</p>
8	2006	<p>1 Y. Khajuria and P. C. Deshmukh, Xe(4d) triple differential cross section: Modified semiclassical exchange approximation in the electron-atom collision <i>J. Phys. B: At. Mol. Opt. Phys.</i>, 2006. 39 569.</p> <p>2 Yusuke Miyake, Masahiko Takahashi, Noboru Watanabe, Yugal Khajuria, Yasuo Udagawa, Yasuhiro Sakai and Takeshi Mukoyama, Examination of (e,2e) scattering models by comparison of momentum profiles of noble gases between experiment and theory, <i>Physical Chemistry Chemical Physics</i> 2006 8 3022</p>
9	2007	<p>1 Y. Khajuria, S Sunil Kumar, and P. C. Deshmukh, (e, 2e) triple differential cross section of Mg in coplanar symmetric geometry. <i>Phys. Rev. A</i> 75 022708 2007.</p>
10	2008	<p>1 Y. Khajuria, and P.C.Deshmukh, (e, 2e) study of Ca in coplanar symmetric geometry <i>Phys. Rev. A</i> 2008 78 024702</p>

11	2009	1 Y. Khajuria , S. Sunil Kumar and P.C. Deshmukh, Modified Semiclassical Exchange Approximation in the Electron Atom Collision: K and Mg (e,2e) Triple Differential Cross Section <i>Phys. Lett. A</i> 2009 373 4442.
12	2014	1 Sumit Sanotra, Rimpay Gupta, Ujval Gupta, Yugal Khajuria Haq Nawaz Seikh, Synthesis, crystal structure, photoluminescence and DFT studies of bis(1,10-phenanthroline) di (K ² -OONitrate) cadmium (II), <i>Spectrochimica Acta Part A</i> 2014 129 392 2 P Gupta, AK Bedyal, Vinay Kumar, Y Khajuria , S P Lochab, SS Pitale, OM Ntwaeaborwa, H C Swart Photoluminescence and thermoluminescence properties of Tb ³⁺ doped K ₃ Gd(PO ₄) ₂ nanophosphor <i>Materials Research Bulletin</i> 2014 60 401. 3 Palvi Gupta, A.K. Bedyal, Vinay Kumar , Y. Khajuria, Vinod Kumar, E. Coetsee-Hugo, O.M. Ntwaeaborwa, H.C. Swart, Spectral and surface investigations on Eu ³⁺ doped K ₃ Y(PO ₄) ₂ nanophosphor: A promising orange-red phosphor for white light-emitting diodes <i>Optical Materials</i> 2014 36(5) 1001
13	2015	1 Ujval Gupta, Vinay Kumar, Vivek K. Singh, RajniKant, Yugal Khajuria , Spectroscopic studies and quantum chemical investigations of (3, 4-dimethoxybenzylidene) propanedinitrile, <i>Spectrochim. Acta Part- A</i> 2015 14065. 2 Neesha Yadav, Shailja Singh, Shrawan Kumar Mangawa, Sandeep K. Dixit, Ujval Gupta, Yugal Khajuria , Satish Kumar Awasthi, Fluorescent probe 7-(prop-2-yn-1-yloxy)-2H-chromen-2-one: Experimental and DFT based approach to photophysical properties, <i>Spectrochim. Acta Part- A</i> 2015 148 311. 3 P. Gupta, A K Bedyal, Vinay Kumar , Y Khajuria, Vishal Sharma, O M Ntwaeaborwa, H C Swart Energy transfer mechanism from Gd ³⁺ to Sm ³⁺ in K ₃ Gd(PO ₄) ₂ :Sm ³⁺ Phosphor, <i>Material Research Express</i> 2015 2 076202.
14	2016	1 Arvind Kumar, Satyanand Kumar, Yugal Khajuria and Satish Kumar Awasthi A comparative study between heterogeneous stannous chloride loaded silica nanoparticles and a homogeneous stannous chloride catalyst in the synthesis of 5-substituted 1H-tetrazole, <i>RSC Advances</i> 2016 6 75227 2 Jigmet Ladol, Heena Khajuria, Haq Nawaz Sheikh, and Yugal Khajuria Synthesis and characterization of bi-functional magnetoluminescent Fe ₃ O ₄ @SiO ₂ @NaLuF ₄ :Eu ³⁺ hybrid core/shell nanospheres, <i>J. Chem. Sci.</i> 2016 128, No. 7 1149 3 Palvi Gupta, A.K. Bedyal, Vinay Kumar, Vivek K. Singh, Y. Khajuria , O.M. Ntwaeaborwa, H.C. Swart Thermoluminescence and glow curves analysis of γ-exposed Eu ³⁺ doped K ₃ Y(PO ₄) ₂ nanophosphors, <i>Materials Research Bulletin</i> 2016 11 111

Papers in referred conference proceedings

1. **Y. Khajuria**, L. Q. Chen, X. J. Chen and K. Z. Xu, (e, 2e) triple differential cross section of argon at 64.6 eV. AIP conference proceedings **604** 297 2001.
2. N. Watanabe, **Y. Khajuria**, M. Takahashi, Y. Udagawa, et al, (e,2e) and (e,3-1e) studies on double processes of He near Bethe Ridge, , AIP Conf. Proceeding **811** 96 2006.
3. S Sunil Kumar, **Yugal Khajuria** and P C Deshmukh, (e,2e) Study of Ca in Coplanar Symmetric geometry at low impact energies using Distorted wave Born Approximation, J. of Phys. **80**, 012021 2007.

Books Publications:

S. No.	Year	Publication
1	2016	Electrodynamics, Narosa

Research Supervised:

S. No.	Year	Role	Research Topic	Status
1	2016	Supervisor	A Study of Molecular Structure and Vibrational Spectra of Molecules	Thesis Submitted
2	2016	Co- Supervisor	Synthesis and Spectra Studies of Mixed Phosphate based Luminescent Nanomaterials	Thesis Submitted
3	2014 (September)	Supervisor	Structural, spectroscopic and Thermodynamical properties of organic molecules: Experimental and Theoretical studies	On-going

Professional Affiliation:

S. No.	Designation	Organization
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1.	Assistant Prof.	SMVDU
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