




Faculty Details proforma for DU Web-site

(PLEASE FILL THIS IN AND Email it to websiteDU@du.ac.in and
cc:director@ducc.du.ac.in)

Title	Mrs.	First Name	Annapoorni	Last Name	Subramanian	Photograph
Designation		Professor				
Address		109 Vaishali Pitampura Delhi – 110 088				
Phone No Office						
Residence Mobile		011-27315329 9871521718				
Email		annapoornis@yahoo.co.in, annapoornis.phys@gmail.com				
Web-Page						
Educational Qualifications						
Degree		Institution			Year	
Angelo Indian High School Exam (AIHSC)		St. Francis Xavier Angelo Indian High School, Chennai			1977	
Pre-University (Maths, Phys, Chem)		Lady Doak College, Madurai Kamaraj University, Madurai			1979	
B.Sc (Special) Physics		Lady Doak College, Madurai Kamaraj University, Madurai			1982	
M.Sc (Physics)		Madura College, Madurai Kamaraj University, Madurai			1984	
Ph. D		Department of Physics, Indian Institute of Technology Chennai Title of thesis: Magnetic and Electrical behaviour of certain hydrogenated Rare Earth Transition Metal systems			1990	
Career Profile						
Post Doctoral Experience:						
Institution		Position held		Name of the project		
Indian Institute of Technology, Chennai		Project Associate Sept. 1989-Jan1990		Magnetostrictive materials for underwater sound transducers, Department Electronics (DOE)		
National Physical Laboratory, Pusa, New Delhi		Research Associate Aug 90 – Feb.92		Synthesis, characterisation and application of conducting polymers, European Economy Community (EEC) project		
National Physical Laboratory, Pusa, New Delhi		Research Associate March 92 - Feb 93		CSIR Fellow		
Permanent Position Held:						
Institution		Position Held		Period		
Department of Physics and Astrophysics, University of Delhi, Delhi		Lecturer		March 93 – Nov. 96		

Department of Physics and Astrophysics, University of Delhi, Delhi	Reader	Nov. 96 – April 2001
Department of Physics, University of Allahabad, Allahabad	Reader	April 2001 - Jan 2002
Department of Physics and Astrophysics, University of Delhi, Delhi	Reader	Jan 2002 – Nov. 2006
Department of Physics and Astrophysics University of Delhi, Delhi	Professor	Nov 2006 – till date

Administrative Assignments

Co-ordinator, M.Tech (Nanoscience and Nanotechnology)
Provost, Rajeev Gandhi Hostel for Girls (RGHG), Dhaka Complex
Managing Committee: Daulat Ram College, Keshav Mahavidhyalaya, Lady Irwin College and Ram Lal Anand College
Academic council: Jawaharlal Nehru University (presently), Pondicherry University, Amity Institute of Nanotechnology
GIAN: Local coordinator

Areas of Interest / Specialization

Magnetic Phase transition in metal alloys, Nanomagnetic materials, Magnetic nanocomposites, Conducting Polymers, Biosensors, Plasmonic materials, Organic/inorganic interfaces

Subjects Taught

Theory:

Electronics (Core) – M.Sc (Previous)
Solid State Physics (Core) – M.Sc and M.Tech (Nanoscience and nanotechnology)
Experimental Solid State Physics I and II – M.Sc (Final)
Metamaterials: Plasmonics and Photonics – M.Tech (Nanoscience and Nanotechnology)
Soft condensed matter – M.Tech (Nanoscience and Nanotechnology)

Laboratory:

Electronics – M.Sc (Previous)
Solid State Physics – M.Sc (Previous)
Waves and Optics – M.Sc (Previous)
Experimental Solid State Laboratory – M.Sc (final)

July 2017 – April 2018

Time table of the subjects taught during the current semester

S.No.	Subject	Days	Time	Classroom
1	Laboratory: M.Sc (final) - Lab I and II Solid State Physics Laboratory	Monday and Tuesday	1.30 to 5.30 pm	M. Sc (Final) – Physics Solid State Laboratory

Research Guidance				
Research students: Completed: 17		working presently: 4		
Sr. No	Title of thesis	Date of Regd.	Status (awarded/ submitted/ ongoing)	Name of the student
1	Study of nano-crystalline iron oxide and cobalt substituted iron oxide films by sol-gel process	1995	2001	Dr. Pratima Chauhan
2	Synthesis and characterisation of polyaniline and substituted polyaniline copolymers	1998	2002	Dr. Amit Lochan Sharma
3	Application of poly-n-vinylcarbazole, poly-3-dodecy thiophene and poly-3 hexyl thiophene Langmiur Blodgett films to some biosensors	1999	2003	Dr. Rahul Shingal
4	Transport and Magnetic properties of conducting polymers and related nano composites	1999	2003	Dr. Komila Suri
5	Memory effect in defored helix ferroelectric and electroclinic liquid crystal materials	2002	2006	Dr. Sarabjot Kaur
6	Optical and magnetic properties of nanometals prepared by electro-exploding wire technique	2002	2007	Dr. Abdullah Alquda
7	Conducting mechanisms in poly (3-hexylthiophene) {P3HT} – a polymeric semiconductor	2003	2007	Dr. Rashmi
8	Structural and magnetic behaviour of conducting polymer/iron oxide nanocomposites	2003	2008	Dr. Raksha Sharma
9	Studies of Magnetic and electrical properties of Substituted Lithium Ferrites	2007	2010	Dr.Vivek Kumar Verma
10	Magnetic Interactions in Nanomagnetic Nickel Ferrite clusters	Sept. 2005	2010	Dr. Rakesh Malik
11	Plasmonic Behaviour of Noble Metals and Metal – Metal oxide hybrid Nanostructures	01/08/06	2011	Dr.Nongmaithem Kamal Singh
12	Optical Properties of undoped and Erbium doped Ag/Au-dielectric nanocomposites	2007	2013	Dr. Manisha

	and the effect of swift heavy ions				
13	Cobalt based hard Magnetic Nanostructures L10 CoPt alloys and CoFe ₂ O ₄	24/11/08	Nov. 2013	Dr. Neeru Sehdev	
14	Structural and Magnetic Phase transition of Hard Magnetic FePt alloy nanostructures	24/11/08	Nov. 2013	Dr. Rohit Medwal <i>Best thesis award 2013, Department of Atomic Energy (DAE)</i>	
15	ZnO/conducting polymer interfaces and nanocomposites: Optical, Electrical and Sensing properties	Nov 2008	June 2014	Dr.Mansi Dhingra <i>(Best Paper award in 2014, by Materials Research Society of India (MRSI))</i>	
16	Electrical and Optical properties of ZnO based inorganic/Organic hybrid nanostructures for sensor applications	Nov 2008	August 2014	Dr. Lalit Kumar	
17	Magnetic transitions in Fe-Pt alloy thin films	2010	August 2015	Dr. Rekha Gupta	
18	Anisotropy driven magnetic properties of metal and metal alloys	Feb.2013	July 2018	Mr. Rajan Goyal	
19	Switching behaviour in magnetic multilayers	Feb 2015	Ongoing	Mr. Siddharth Choudhary	
20	Electrical and optical properties of Oxy-nitrates	Feb 2015	Ongoing	Mr. Vishnu Mev	
21	Magnetization dynamics and exchange spring in soft/hard magnetic materials	2016	Ongoing	Ms. Garima Vashist	
22	Magneto – optic studies on magnetic systems	2017	Ongoing	Ms. Moditma	Ms. Modit
23	Magnetic based materials	2018	Ongoing	Mr. Kapil Dev	

Publications Profile

Refereed international Publications:

Refereed international Publications: 100 in Journals

15 in proceedings

Books:

Chapter 13: Conducting Polymer in Molecular Electronics in **Handbook of Polymer in Electronics**, ed.

No	Year	Particulars of Publications	IF
1.	1989	Effect of hydrogen on the magnetic properties of $\text{Ho}_{0.85}\text{Tb}_{0.15}\text{Fe}_2$ and $\text{Dy}_{0.73}\text{Tb}_{0.27}\text{Fe}_2$ S Annapoorni , G Markandeyulu, KVS R Rao <i>Journal of Applied Physics</i> 65 (12), (1989), 4955-4958	2.18
2.	1990	^{57}Fe Mossbauer studies on $\text{Ho}_{0.85}\text{Tb}_{0.15}\text{Fe}_2\text{H}_x$ and $\text{Dy}_{0.73}\text{Tb}_{0.27}\text{Fe}_2\text{H}_x$ S Annapoorni , KVS R Rao <i>Journal of Applied Physics</i> 67 (1), (1990), 424-429	2.18
3.		Electrical Resistivity Measurements on $\text{Ho}_{0.85}\text{Tb}_{0.15}\text{Fe}_2\text{H}_x$ and $\text{Dy}_{0.73}\text{Tb}_{0.27}\text{Fe}_2\text{H}_x$ Systems S Annapoorni , G Markandeyulu, K VS Rama Rao <i>Journal of the Physical Society of Japan</i> 59 (8), (1990), 3014-3015	2.57
4.		Ferromagnetic resonance studies on $\text{Ho}_{0.85}\text{Tb}_{0.15}\text{Fe}_2\text{H}_x$ and $\text{Dy}_{0.73}\text{Tb}_{0.27}\text{Fe}_2\text{H}_x$ systems S Annapoorni , G Markandeyulu, K V S R Rao <i>Journal of Applied Physics</i> 68 (3), (1990), 1394-1396	2.18
5.	1991	Solubility of hydrogen in $\text{Zr}_{1-x}\text{Ho}_x\text{Co}_2$ ($0 \leq x \leq 1$) alloys R Ramesh, S Annapoorni , KVS R Rao <i>Journal of the Less Common Metals</i> 170 (1), (1991), 75-82	2.73
6.	1993	Synthesis and characterization of poly (aniline-co-o-anisidine). A processable conducting copolymer SS Pandey, S Annapoorni , BD Malhotra <i>Macromolecules</i> 26 (12), (1993), 3190-3193	5.80
7.		Photocarrier mobility in processable polyaniline S Annapoorni , NS Sundaresan, SS Pandey, BD Malhotra <i>Journal of Applied Physics</i> 74 (3), (1993), 2109-2111	2.18
8.	1994	Application of poly (aniline) as a glucose biosensor K Ramanathan, S Annapoorni , BD Malhotra <i>Sensors and Actuators B: Chemical</i> 21 (3), (1994), 165-169	4.09
9.	1996	Immobilization of glucose oxidase in electrochemically prepared polypyrrole films K Ramanathan, S Annapoorni , A Kumar, BD Malhotra <i>Journal of materials science letters</i> 15 (2), (1996), 124-12	2.37
10.		Electrical properties of metal/Langmuir–Blodgett layer/semiconductive devices MK Ram, S Annapoorni , BD Malhotra <i>Journal of applied polymer science</i> 60 (3), (1996), 407-411	1.6
11.		Diode like behaviour of an ion irradiated polyaniline film MP Srivastava, SR Mohanty, S Annapoorni , RS Rawat <i>Physics Letters A</i> 215 (1), (1996), 63-68	1.68
12.	1997	Magnetite phase due to energetic argon ion irradiation from a dense plasma focus on hematite thin film	1.68

		P Agarwala, S Annapoorni , MP Srivastava, RS Rawat, P Chauhan <i>Physics Letters A</i> 231 (5), (1997), 434-438	
13.	1998	Dielectric relaxation in thin conducting polyaniline films MK Ram, S Annapoorni , SS Pandey, BD Malhotra <i>Polymer</i> 39 (15), (1998), 3399-3404	1.65
14.		Preparation, characterization and optical properties of α -Fe ₂ O ₃ films by sol-spinning process P Chauhan, S Annapoorni , SK Trikha <i>Bulletin of Materials Science</i> 21 (5), (1998), 381-385	0.87
15.	1999	Humidity-sensing properties of nanocrystalline haematite thin films prepared by sol-gel processing P Chauhan, S Annapoorni , SK Trikha <i>Thin Solid Films</i> 346 (1), (1999), 266-268	1.877
16.	2001	Phase change induced by polypyrrole in iron-oxide polypyrrole nanocomposite K Suri, S Annapoorni , RP Tandon <i>Bulletin of Materials Science</i> 24 (6), (2001), 563-567	0.87
17.		Synthesis and Characterization of Fluoro-Substituted Polyaniline BD Malhotra, HH Weetall, Amit L Sharma, Manju Gerard, Rahul Singhal, S Annapoorni <i>Applied Biochemistry and Biotechnology-Part A-Enzyme Engineering and Biotechnology</i> , 96 (1-3) (2001), 155-166	1.735
18.		Preparation and Characterization of Poly-N-Vinyl Carbazole Langmuir-Blodgett Films BD Malhotra, HH Weetall, Rahul Singhal, Anamika Gambhir, S Annapoorni <i>Applied Biochemistry and Biotechnology-Part A-Enzyme Engineering and Biotechnology</i> , 96 (1-3) (2001), 259-268	1.735
19.		Synthesis and characterization of a copolymer: Poly (aniline-co-fluoroaniline) AL Sharma, V Saxena, S Annapoorni , BD Malhotra <i>Journal of Applied Polymer Science</i> 81 (6), (2001), 1460-1466	1.6
20.		A novel nanocomposite sensor for detection of humidity K Suri, S Annapoorni, RP Tandon <i>Journal of Scientific and Industrial Research</i> 60 , (2001) 724-727	0.5
21.		Synthesis and characterization of polynitrosoaniline AL Sharma, S Annapoorni , BD Malhotra <i>Polymer</i> 42 (19), (2001), 8307-8310	1.653
22.		Synthesis and characterization of fluoro-substituted polyaniline AL Sharma, M Gerard, R Singhal, BD Malhotra, S Annapoorni <i>Applied biochemistry and biotechnology</i> 96 (1-3),(2001), 155-165	1.735
23.		Preparation and characterization of poly-N-vinyl carbazole Langmuir-Blodgett films R Singhal, A Gambhir, S Annapoorni <i>Applied biochemistry and biotechnology</i> 96 (1-3), (2001) 259-267	1.735
24.	2002	Gas and humidity sensors based on iron oxide-polypyrrole	

		nanocomposites K Suri, S Annapoorni , AK Sarkar, RP Tandon <i>Sensors and Actuators B: Chemical</i> 81 (2), (2002), 277-282	4.09
25.		Nanocomposite of polypyrrole-iron oxide by simultaneous gelation and polymerization K Suri, S Annapoorni , RP Tandon, NC Mehra <i>Synthetic metals</i> 126 (2), (2002), 137-142	1.829
26.		Langmuir–Blodgett films of poly (3-dodecyl thiophene) for application to glucose biosensor R Singhal, W Takashima, K Kaneto, SB Samanta, S Annapoorni , <i>Sensors and Actuators B: Chemical</i> 86 (1), (2002),42-48	4.09
27.		Immobilization of urease on poly (N-vinyl carbazole)/stearic acid Langmuir–Blodgett films for application to urea biosensor R Singhal, A Gambhir, MK Pandey, S Annapoorni , BD Malhotra <i>Biosensors and Bioelectronics</i> 17 (8),(2002), 697-703	6.451
28.	2003	Characterization of electrochemically synthesized poly (2-fluoroaniline) film and its application to glucose biosensor AL Sharma, S Annapoorni , BD Malhotra <i>Current Applied Physics</i> 3 (2), (2003), 239-245	2.026
29.		Thermal transition behaviour of iron oxide–polypyrrole nanocomposites K Suri, S Annapoorni , RP Tandon, C Rath, VK Aggrawal <i>Current Applied Physics</i> 3 (2), 209-213	2.126
30.		Effect of field dependent trap occupancy on organic thin film transistor characteristics VR Balakrishnan, AK Kapoor, V Kumar, SC Jain, R Mertens, S. Annapoorni <i>Journal of Applied Physics</i> 94 (8), (2003), 5302-5306	2.18
31.		AC conduction in nanocomposites of polypyrrole K Suri, S Annapoorni , RP Tandon <i>Journal of non-crystalline solids</i> 332 (1), (2003)279-285	1.766
32.	2004	Single domain magnetic arrays: role of disorder and interactions Subhalakshmi Lamba, S Annapoorni <i>The European Physical Journal B-Condensed Matter and Complex Systems</i> , 39 (1), (2004)19-25	1.345
33	2005	Composition dependent magnetic properties of iron oxide-polyaniline nanoclusters R Sharma, S Lamba, S Annapoorni , P Sharma, A Inoue <i>Journal of Applied Physics</i> 97 (1), 014311	2.18
34		Colloidal dispersions of polyindole G Rajasudha, D Rajeswari, B Lavanya, R Saraswathi, S Annapoorni , N.C. Mehra <i>Colloid and Polymer Science</i> 283 (5), (2005)575-582	2.430
35.		Memory effect in smectic-A phase of ferroelectric liquid crystal AK Thakur, SS Bawa, AM Biradar, S Kaur, S Annapoorni <i>Journal of Applied Physics</i> 97 (8), (2005)084106	2.18

36.		Magnetic properties of polypyrrole-coated iron oxide nanoparticles R Sharma, S Lamba, S Annapoorni <i>Journal of Physics D: Applied Physics</i> 38 (18), (2005)3354	2.721
37.		Is Curie–Weiss law valid in every ferro-to-para transition? S Kaur, AK Thakur, A Choudhary, SS Bawa, AM Biradar, S Annapoorni <i>Applied Physics Letters</i> 87 (10), (2005)102507	3.302
38.		Interaction effects in magnetic oxide nanoparticle systems R Sharma, C Pratima, S Lamba, S Annapoorni <i>Pramana</i> 65 (4), (2005), 739-743	0.649
39.		Fluorescent silver nanoparticles via exploding wire technique A Abdullah, S Annapoorni <i>Pramana</i> 65 (5), (2005)815-819	0.649
40.	2006	Magnetic relaxation studies in organic-inorganic nanoclusters R Sharma, K Suri, RP Tandon, S Annapoorni , S Lamba, BV Kumaraswami <i>Journal of Applied Physics</i> 99 (2), (2006) 024311	2.18
41.	2007	The incorporation of silver nanoparticles into polypyrrole: conductivity changes A Alqudami, S Annapoorni , P Sen, RS Rawat <i>Synthetic metals</i> 157 (1),(2007) 53-59	1.829
42.		Fluorescence from metallic silver and iron nanoparticles prepared by exploding wire technique A Alqudami, S Annapoorni <i>Plasmonics</i> 2 (1), (2007), 5-13	2.238
43.		Magnetic properties of iron nanoparticles prepared by exploding wire technique A Alqudami, S Annapoorni , S Lamba, PC Kothari, RK Kotnala <i>Journal of Nanoscience and Nanotechnology</i> 7 (6),(2007) 1898- 1903	1.556
44	2008	Effects of swift heavy ions irradiation on polypyrrole thin films RC Ramola, A Alqudami, S Chandra, S Annapoorni , JMS Rana, <i>Radiation Effects & Defects in Solids</i> 163 (2), (2008),139-147	0.603
45.		Conduction mechanisms in poly (3-hexylthiophene) thin-film sandwiched structures AK Kapoor, S Annapoorni , V Kumar <i>Semiconductor Science and Technology</i> 23 (3),(2008), 035008	2.19
46.		A comparative study of the effect of O ⁺ 7ion beam on polypyrrole and CR-39 (DOP) polymers RC Ramola, S Chandra, JMS Rana, RG Sonkawade, PK Kulriya, F Singh, DK Avasthi, S Annapoorni <i>Journal of Physics D: Applied Physics</i> 41 (11), (2008), 115411	2.721
47.		Metal oxide/polyaniline nanocomposites: Cluster size and composition dependent structural and magnetic properties R Sharma, R Malik, S Lamba, S Annapoorni <i>Bulletin of Materials Science</i> 31 (3), (2008), 409-413	0.87

48.		Ag–Au alloy nanoparticles prepared by electro-exploding wire technique A Alqudami, S Annapoorni , SM Shivaprasad <i>Journal of Nanoparticle Research</i> 10 (6), (2008), 1027-1036	2.278
49.		Competing magnetic interactions in nickel ferrite nanoparticle clusters: Role of magnetic interactions R Malik, S Annapoorni , S Lamba, P Sharma, A Inoue <i>Journal of Applied Physics</i> 104 (6), (2008), 064317	2.18
50.	2009	Study of optical band gap, carbonaceous clusters and structuring in CR-39 and PET polymers irradiated by 100MeV O ⁷⁺ ions RC Ramola, S Chandra, A Negi, JMS Rana, S Annapoorni , <i>Physica B: Condensed Matter</i> 404 (1), (2009), 26-30	1.278
51.		Interaction of oxygen (O ⁺) ion beam on polyaniline thin films S Chandra, S Annapoorni , RG Sonkawade, PK Kulriya, F Singh, <i>Indian Journal of Physics</i> 83 (7), (2009) 943-947	1.377
52.		Magnetic and electrical properties of manganese and cadmium co-substituted lithium ferrites V Verma, SP Gairola, MC Mathpal, S Annapoorni , RK Kotnala <i>Journal of Alloys and Compounds</i> 481 (1) (2009), 872-876	2.999
53		Comparative study of structural and magnetic properties of nano-crystalline Li _{0.5} Fe _{2.5} O ₄ prepared by various methods V Verma, V Pandey, S Singh, RP Aloysius, S Annapoorni , RK Kotnala <i>Physica B: Condensed Matter</i> 404 (16), (2009)2309-2314	1.278
54.		Structural, morphological, and optical characterisation of ZnO nanostructures fabricated by electrochemical deposition NK Singh, N Tripathi, S Rath, S Annapoorni <i>Journal of nanoscience and nanotechnology</i> 9 (9) (2009)5608-5613	1.556
55.		Remarkable influence on the dielectric and magnetic properties of lithium ferrite by Ti and Zn substitution V Verma, V Pandey, VN Shukla, S Annapoorni , RK Kotnala <i>Solid State Communications</i> 149 (39),(2009) 1726-1730	1.897
56.		Alignment of magnetic clusters in polymer using Ar ion beam R Malik, R Sharma, D Kanjilal, S Annapoorni <i>Journal of Physics D: Applied Physics</i> 42 (23), (2009)235501	2.721
57		Enhanced Bio-molecular Sensing Capability of LSPR, SPR-ATR Coupled Technique N. Kamal Singh, Abdullah Alqudami, S. Annapoorni , Vineet Sharma and K. Muralidhar <i>AIP Conf. Proc.</i> 1147 , (2009) 331; http://dx.doi.org/10.1063/1.3183453	
58.	2010	Low temperature resistivity study of nanostructured polypyrrole films under electronic excitations S Chandra, S Annapoorni , F Singh, RG Sonkawade, JMS Rana, RC Ramola <i>Nuclear Instruments and Methods in Physics Research Section B:</i>	1.12

		<i>Beam</i> 268 (1), (2010) 62-66	
59.		Effects of an oxygen-ion beam (O ⁺ 7, 100 MeV) and γ irradiation on polypyrrole films S Chandra, S Annapoorni , F Singh, RG Sonkawade, JMS Rana, RC Ramola <i>Journal of applied polymer science</i> 115 (4), (2010)2502-2507	1.6
60.		Role of anisotropy and interactions in magnetic nanoparticle systems R Malik, S Lamba, RK Kotnala, S Annapoorni <i>The European Physical Journal B</i> 74 (1), (2010) 75-80	1.345
61.		Effects of gamma ray and neutron radiation on polyaniline conducting polymer RG Sonkawade, V Kumar, L Kumar, S Annapoorni , SG Vaijapurkar, AS Dhaliwal <i>Indian Journal of Pure and Applied Physics</i> 48 (7), (2010)453-456	0.766
62.		Magnetic properties of nano-crystalline Li _{0.35} Cd _{0.3} Fe _{2.35} O ₄ ferrite prepared by modified citrate precursor method V Verma, MA Dar, V Pandey, A Singh, S Annapoorni , RK Kotnala <i>Materials Chemistry and Physics</i> 122 (1),(2010) 133-137	2.129
63		Raman study of polyaniline nanofibers prepared by interfacial polymerization M Jain, S Annapoorni <i>Synthetic metals</i> 160 (15), (2010) 1727-1732	1.829
64.		ZnO nanoparticles prepared by an electroexploding wire technique NK Singh, A Alqudami, S Annapoorni <i>Physica Status Solidi (a)</i> 207 (9), (2010)2153-2158	1.61
65.		Enhanced microwave absorption properties in polyaniline and nano-ferrite composite in X-band SP Gairola, V Verma, L Kumar, MA Dar, S Annapoorni , RK Kotnala <i>Synthetic Metals</i> 160 (21), (2010) 2315-2318	1.829
66.		Optical and room temperature sensing properties of highly oxygen deficient flower-like ZnO nanostructures NK Singh, S Shrivastava, S Rath, S Annapoorni <i>Applied Surface Science</i> 257 (5),(2010) 1544-1549	2.538
67.		Mössbauer and magnetic studies in nickel ferrite nanoparticles: effect of size distribution R Malik, S Annapoorni , S Lamba, VR Reddy, A Gupta, P Sharma, A Inoue <i>Journal of Magnetism and Magnetic Materials</i> 322 (23), (2010) 3742-3747	1.970
68.	2011	Enhancement of photoluminescence in Er-doped Ag–SiO ₂ nanocomposite thin films: a post annealing study M Tiwary, NK Singh, S Annapoorni , DC Agarwal, DK Avasthi, YK Mishra, P Mazzoldi, G Mattei, C Sada, E Trave, G Battaglin <i>Vacuum</i> 85 (8), (2011) 806-809	1.530

69.		Enhanced phase stabilization of CoPt in the presence of Ag N Sehdev, R Medwal, S Annapoorni <i>Journal of Applied Physics</i> 110 (3), (2011)033901	2.18
70.		ZnO modified gold disc: A new route to efficient glucose sensing NK Singh, B Jain, S Annapoorni <i>Sensors and Actuators B: Chemical</i> 156 (1), (2011) 383-387	4.097
71.		Dispersion of laser droplets using H ⁺ ions and annealing effect on pulsed laser deposited nickel ferrite thin films R Malik, S Annapoorni , S Lamba, S Mahmood, RS Rawat <i>Applied Physics A</i> 105 (1), (2011)233-238	1.694
72	2012	Order–disorder investigation of hard magnetic nanostructured FePt alloy R Medwal, N Sehdev, S Annapoorni <i>Journal of Physics D: Applied Physics</i> 45 (5), (2012)055001	2.721
73		Oxygen vacancy induced phase formation and room temperature ferromagnetism in undoped and Co-doped TiO ₂ thin films P Mohanty, NC Mishra, RJ Choudhary, A Banerjee, T Shripathi, NP Lalla, S Annapoorni , Chandana Rath <i>Journal of Physics D: Applied Physics</i> 45 (32), (2012) 325301	2.721
74		Electronic states of self stabilized L10 FePt alloy nanoparticles R Medwal, N Sehdev, S Annapoorni <i>Applied Physics A</i> 109 (2), (2012)403-408	1.694
75.		Synthesis and characterization of Au–alumina nanocomposites prepared by atom beam co-sputtering M Tiwari, DC Agarwal, S Mohapatra, JC Pivin, DK Avasthi, S Annapoorni <i>Physica Status Solidi (a)</i> 209 (12), (2012) 2499-2504	1.61
76.	2013	Temperature-dependent magnetic and structural ordering of self-assembled magnetic array of FePt nanoparticles R Medwal, N Sehdev, S Annapoorni <i>Journal of Nanoparticle Research</i> 15 (2), (2013) 1-10	2.278
77.		Worm like zinc oxide nanostructures as efficient LPG sensors M Dhingra, NK Singh, S Shrivastava, PS Kumar, S Annapoorni <i>Sensors and Actuators A: Physical</i> 190 , (2013)168-175	1.903
78.		Polyaniline mediated enhancement in band gap emission of Zinc Oxide M Dhingra, S Shrivastava, PS Kumar, S Annapoorni <i>Composites Part B: Engineering</i> 45 (1), (2013)1515-1520	3.242
79.		Correlation of interlayer diffusion with the stoichiometric composition of RF sputtered Pt/Co/Pt sandwiched structures N Sehdev, R Medwal, DC Agrawal, S Annapoorni <i>Journal of Materials Science</i> 48 (8), (2013)3192-3197	2.371
80.		A new route to glucose sensing based on surface plasmon resonance using polyindole L Kumar, R Gupta, D Thakar, V Vibhu, S Annapoorni <i>Plasmonics</i> 8 (2), (2013) 487-494	2.238

81.		ZnO/PPy Hybrid Heterojunction as an Ultraviolet Photo-sensor M Dhingra, S Shrivastava, PS Kumar, S Annapoorni <i>Journal of electronic materials</i> 42 (6), (2013)1235-1241	1.635
82.		Impact of interfacial interactions on optical and ammonia sensing in zinc oxide/polyaniline structures M Dhingra, L Kumar, S Shrivastava, PS Kumar, S Annapoorni <i>Bulletin of Materials Science</i> 36 (4), (2013) 647-652 MRSI prize for best paper: A cash prize of Rs.2000 by the Materials Research society of India (MRSI), 2014	0.87
83.		Effects of Li and Au ion beams irradiation on Makrofol-KG A Negi, RV Hariwal, A Semwal, D Kanjilal, RC Ramola, S Annapoorni <i>Radiation Effects and Defects in Solids</i> 168 (7-8), (2013)580-586	0.603
84.		Phase investigation in Pt supported off-stoichiometric iron-platinum thin films R Gupta, R Medwal, S Annapoorni <i>Materials Research Bulletin</i> 48 (10), (2013)3881-3886	2.288
85.		Pt diffusion driven L1 0 ordering in off-stoichiometric FePt thin films R Gupta, R Medwal, N Sehdev, S Annapoorni <i>Journal of Magnetism and Magnetic Materials</i> 345 , (2013)60-64	1.970
86.		Effect of Pt layers on chemical ordering in FePt thin films R Gupta, R Medwal, P Sharma, AK Mahapatro, S Annapoorni <i>Superlattices and Microstructures</i> 64 , (2013)408-417	1.295
87.	2014	Possibility of room-temperature multiferroism in Mg-doped ZnO P Kumar, Y Kumar, HK Malik, S Annapoorni , S Gautam, KH Chae, K Asokan <i>Applied Physics A</i> 114 (2), (2014)453-457	1.694
88.		Magnetic memory effects in nickel ferrite/polymer nanocomposites R Malik, N Sehdev, S Lamba, P Sharma, A Makino, S Annapoorni <i>Applied Physics Letters</i> 104 (12), (2014)122407	3.302
89.		Processing temperature driven morphological evolution of ZnO nanostructures prepared by electro-exploding wire technique L Kumar, R Medwal, P Sen, S Annapoorni <i>Materials Research Express</i> 1 (1), (2014) 015045	0.968
90.		Defects mediated diffusion in Pt/Co/Pt multilayers induced by dense electronic excitations N Sehdev, R Medwal, R Malik, DC Agarwal, K Asokan, D Kanjilal, S. Annapoorni <i>Current Applied Physics</i> 14 (3), (2014) 455-461	2.026
91.		Dielectric Response of Poly Methyl Methacrylate/ZnFe ₂ O ₄ Composites Under 400 KeV Ar ⁺ 2 Ions A Negi, F Singh, RK Kotnala, D Kanjilal, S Annapoorni <i>Advanced Science Letters</i> 20 (5-6), (2014)1089-1093	1.9
92.		Electrical Coupling of Organic/inorganic Semiconductor Interfaces: A Comparative Study.	1.9

		M Dhingra, S Shrivastava, PS Kumar, S Annapoorni <i>Advanced Materials Research</i> 974 (2014)	
93.		Room temperature coercivity and interaction effects in L10 FePt nanoparticles R Medwal, N Sehdev, S Lamba, A Banerjee, S Annapoorni <i>Journal of Physics D: Applied Physics</i> 47 (35), (2014) 355002	2.721
94.		Engineering strain, densification, order parameter and magnetic properties of FePt thin films by dense electronic excitations R Gupta, N Sehdev, K Asokan, D Kanjilal, S Annapoorni <i>Journal of Applied Physics</i> 116 (8), (2014) 083902	2.18
95.		Effect of functionalization on positional ordering of 3nm FePt nanoparticles: Langmuir–Blodgett monolayer R Medwal, K Gogia, D Thakar, V Vibhu, JR Mohan, N Sehdev, S. Annapoorni <i>Surface and Coatings Technology</i> 258 , (2014)509-514	2.102
96.		Au–ZnO hybrid nanostructures prepared by electro-exploding wire technique: Raman signal enhancement and photoluminescence emission quenching NK Singh, R Medwal, S Annapoorni <i>Journal of Materials Science</i> 49 (24), (2014) 8386-8393	2.371
97.		Fabrication of PANI/ZnO heterojunction Lalit Kumar, Anant Bansal and S. Annapoorni <i>AIP Conf. Proc.</i> 1591 , (2014) 1470; http://dx.doi.org/10.1063/1.4872999 Editors: Chitra Murli , D. Bhattacharyya and S. C. Gadkari	
98		Structural and magnetic transformation in electro chemically synthesized FePt thin films on Si/Pt electrodes Rekha Gupta, Rajan Goyal, Rohit Medwal and S. Annapoorni <i>AIP Conf. Proc.</i> 1591 , (2014) 107; http://dx.doi.org/10.1063/1.4872509 Editors: Chitra Murli , D. Bhattacharyya and S. C. Gadkari	
99.	2015	Axonic Au tips induced enhancement in Raman spectra and biomolecular sensing A Saini, R Medwal, S Bedi, B Mehta, R Gupta, T Maurer, J Plain, S. Annapoorni <i>Plasmonics</i> 10 (3), (2015)617-623	2.238
100		Direct evidence of chemical ordering in the FePt nanostructured alloy by HR-TEM R Gupta, R Medwal, S Annapoorni <i>Superlattices and Microstructures</i> 83 , (2015)459-465	1.295
101		Modification of magnetic anisotropy induced by swift heavy ion irradiation in cobalt ferrite thin films R Nongjai, S Khan, H Ahmed, I Khan, S Annapoorni , S Gautam, HJ Lin, Fan-Hsiu Chang, Keun Hwa Chae, K Asokan <i>Journal of Magnetism and Magnetic Materials</i> 394 , (2015)432-438	1.970
102		Coherent phonon modes in nanostructured zinc oxide synthesized by	

		arc-exploding technique R Medwal, S Gupta, SP Pavunny, RK Katiyar, S Annapoorni , RS Katiyar <i>Materials Letters</i> 160 , (2015)183-185	2.489
103	2016	Growth of cobalt nanoparticles in Co–Al ₂ O ₃ thin films deposited by RF sputtering R Goyal, S Lamba, S Annapoorni <i>Physica Status Solidi (A)</i> , 213 (2016)1309-1316	1.525
104		Nucleation controlled magnetization reversal mechanism in oriented L1 0 FeCoPt ternary alloys R Goyal, N Sehdev, S Lamba, S Annapoorni <i>Solid State Communications</i> 226 , (2016) 44-50	1.897
105		Origin of open recoil curves in L1 0-A1 FePt exchange coupled nanocomposite thin film R Goyal, A Kapoor, S Lamba, S Annapoorni <i>Journal of Magnetism and Magnetic Materials</i> 418 , (2016)200-205	1.970
106		Structural, electrical and magnetic properties of dilutely Y doped NiFe ₂ O ₄ nanoparticles Pramod Kumar, Geeta Rana, Gagan Dixit, Ashish Kumar, Vikas Sharma, Rajan Goyal, K.Sachdev, S. Annapoorni , K. Asokan <i>Journal of Alloys and Compounds</i> 685 , (2016) 492-497	3.014
107		Temperature controlled junction behavior of polyaniline/ZnO heterostructures Mansi Dhingra, Sadhna Shrivastava, K. Asokan and S. Annapoorni <i>AIP Conf. Proc.</i> 1731 , (2016) 140038;	
108		Gallium arsenide/gold nanostructures deposited using plasma method O. Mangla, S. Roy and S. Annapoorni <i>AIP Conf. Proc.</i> 1731 , (2016) 050006;	
109		Gold nanoparticles prepared by electro-exploding wire technique in aqueous solutions Lalit Kumar, Akanksha Kapoor, Mayank Meghwal and S. Annapoorni <i>AIP Conf. Proc.</i> 1731 , (2016), 050062	
110		Understanding the origin of Ferromagnetism in Er doped ZnO System Parmod Kumar, Vikas Sharma, Ankita Sarwa, Ashish Kumar, Surbhi, Rajan Goyal, K. Sachdev, S. Annapoorni , K. Asokan and D. Kanjilal <i>RSC Advances</i> 6 (92), (2016) 89242-89249	3.289
111	2017	Exchange hardening in FePt/Fe ₃ Pt dual exchange spring magnet: Monte Carlo modeling Rajan Goyal, S. Lamba, S. Annapoorni <i>Journal of Alloys and Compounds</i> 695 ,(2017) 1014-1019	3.014
112		Flexible room temperature ammonia sensor based on polyaniline Lalit Kumar, Amarjeet Kaur, S. Annapoorni	4.758

		Sensors & Actuators: B. Chemical 240 , 408-416 (2017)	
113		Structural and optical properties of low energy nitrogen ion implanted SrTiO ₃ thin films V Kumar, K Asokan, S Annapoorni AIP Conference Proceedings 1837 (1), 040040	
114		Dense-plasma-driven ultrafast formation of FePt organization on silicon substrate R Medwal, N Sehdev, W Ying, RS Rawat, S Annapoorni Bulletin of Materials Science 40 (1), (2017) 233-238	1.5
115	2018	Annealing of deep level defects in GaAs nanostructures by ion beam irradiation Onkar Mangla, Savita Roy, S. Annapoorni , K. Asokan, Materials Letters 217 , (2018) 231-234	2.57
116		Thermal Annealing and Transient Electronic Excitations Induced Interfacial and Magnetic Effects on Pt/Co/Pt trilayer Neeru Sehdev, Rohit Medwal, Rakesh Malik, K.Asokan, D. Kanjilal and S. Annapoorni Nuclear Instrumentation and Methods in Physics Research 420 , (2018), 50-56	
117		Defect induced Ferromagnetism in Zn/ZnO interfaces Mansi Dhingra, Rekha Gupta and S. Annapoorni Crystal Research & Technology (accepted)	
118		Exchange stiffness variation for thermally annealed FeCo thin films G Vashisht, R Goyal, S Annapoorni AIP Conference Proceedings 1942 (1), (2018) 130017	
119		Modelling of Pinning – Depinning Reversal Mechanism in Ion-irradiated Co/Al ₂ O ₃ thin films Rajan Goyal, Rekha Gupta, Ambika Negi, K. Asokan, D. Kanjilal, S. Lamba and S. Annapoorni Phys Status Solidi A (Press) 2018	
120		Defect induced Ferromagnetism in Zn/ZnO interfaces Mansi Dhingra, Rekha Gupta, S Annapoorni Crystal Research & Technology (Press) 2018	
121		Self-stabilized carbon-L10 FePt nanoparticles for heated dot recording media R Medwal, S Gautam, S Gupta, K Chae, K Asokan, GR Deen, RS Rawat, R. Khatiya and S. Annapoorni IEEE Magnetism Letters, 9 , (2018), DOI: 10.1109/LMAG.2018.2840990	
Google Citation Indices		All (from 1989)	Since 2013
Citations		2640	1288
h-index		29	22
I10-index		63	42
Scopus Citation			
Citations		2200	
h-index		27	

Publications in the Last one year		
1	2017	Exchange hardening in FePt/Fe ₃ Pt dual exchange spring magnet: Monte Carlo modeling Rajan Goyal, S. Lamba, S. Annapoorni Journal of Alloys and Compounds 695,(2017) 1014-1019
2		Flexible room temperature ammonia sensor based on polyaniline Lalit Kumar, Amarjeet Kaur, S. Annapoorni Sensors & Actuators: B. Chemical 240 , 408-416 (2017)
3		Structural and optical properties of low energy nitrogen ion implanted SrTiO ₃ thin films V Kumar, K Asokan, S Annapoorni AIP Conference Proceedings 1837 (1), 040040
4		Dense-plasma-driven ultrafast formation of FePt organization on silicon substrate R Medwal, N Sehdev, W Ying, RS Rawat, S Annapoorni Bulletin of Materials Science 40 (1), (2017) 233-238
5	2018	Annealing of deep level defects in GaAs nanostructures by ion beam irradiation Onkar Mangla, Savita Roy, S. Annapoorni, K. Asokan, Materials Letters 217, (2018) 231-234
6		Thermal Annealing and Transient Electronic Excitations Induced Interfacial and Magnetic Effects on Pt/Co/Pt trilayer Neeru Sehdev, Rohit Medwal, Rakesh Malik, K.Asokan, D. Kanjilal and S. Annapoorni Nuclear Instrumentation and Methods in Physics Research (accepted)
7		Defect induced Ferromagnetism in Zn/ZnO interfaces Mansi Dhingra, Rekha Gupta and S. Annapoorni Crystal Research & Technology (accepted)
8		Exchange stiffness variation for thermally annealed FeCo thin films G Vashisht, R Goyal, S Annapoorni AIP Conference Proceedings 1942 (1), (2018) 130017
9		Self-stabilized carbon-L10 FePt nanoparticles for heated dot recording media, R Medwal, S Gautam, S Gupta, K Chae, K Asokan, G Roshan Deen, R.S. RAwat, R. Katiyar and S. Annapoorni IEEE Magnetism (2018) Accepted
10		Modelling of pinning-depinning reversal mechanism in ion-irradiated Co/Al ₂ O ₃ thin films RajanGoyal, Rekha Gupta, Ambika Negi, K. Asokan, D. Kanjilal, S. Lamba and S. Annapoorni Physica Status Solidi A: Applications and Materials Science (in Press)
Conference Organization/ Presentations (in the last three years)		
<p>Enhanced sensing behaviour in organic-Inorganic nano hybrid interfaces, 1st Indo-UK conference on recent advances in chemical sensors (IUCRACS-14), Gargi College, 11th Feb 2014</p> <p>Phase transformation and magnetic properties of Pt based hard magnetic alloys, School of Physics, University of Hyderabad, 16th April 2014.</p> <p>Magnetic properties of Pt based hard magnetic alloys: Phase transformation, CSR-DAE, Indore, July 2014</p> <p>Delhi Magnetic Memory applications of soft and hard magnetic alloys 16th Feb 2015</p>		

Recent Advances in Physics National Delhi Technical University (DTU),

Recent trends and advances in nanoscale materials for magnetic applications and Tuning the junction behavior of Organic – Inorganic interfaces 8th May **2015**

National conference on solid state chemistry and allied areas (NCSSCAA – 2015), Delhi University

Strain induced anisotropy enhancement in Pt based hard magnetic alloys 28th Oct 2015.

International Conference on Multifunctional Materials for Future Application International, IIT BHU

Effect of Low Ion Irradiation/Implantation on polymeric and metallic systems Nov. **2015**

Workshop on Low Energy Ion Beam Facility (LEIBF -2015) National, Inter University Accelerator Centre (IUAC)

Dense electronic excitations induced phase transformation in Pt based magnetic alloys Dec. **2015**, International conference on magnetic materials (ICMAGMA-2015), VIT, Vellore.

Nanotechnology: Current Status and future trends; 18th Feb 2016, ARSD college, as a part of the mentoring meetings.

“Scientific Equipment: Available Shared National Assets” Stakeholders’ workshop - Development of database of equipment supported under Extramural R&D Projects

30 August 2016, Juniper Hall, India Habitat Centre, Lodhi Road, New Delhi

A study of magnetic domain dynamics – Applications

Refresher/Orientation course, Department of Physics and Astrophysics, 26th October 2016

Effect of Electronic and Nuclear Excitations on Order-disorder transformation in FePt,

National conference on study of Matter Using Intense Radiation Sources under extreme conditions, 25 years of UGC DAE collaboration in Higher Education, 4th November, 2016, Indore.

Anisotropy in exchange coupled hard/soft Fe-Pt alloy nanocomposites and multilayers

Indian Institute of Metals, IIT, Kanpur, 12th November 2016.

Hard/soft Fe-Pt alloy nanocomposites and multilayers as an exchange spring system, Workshop on Spintronics and Magnetism, 29th November 2016, IITD.

Tuning of exchange coupling in FePt based multilayer system, international conference on magnetic materials and applications (ICMAGMA-2017), February 1-3, 2017, Hyderabad, India

Tuning magnetic behaviour in coupled hard/soft nanocomposite, international conference on emerging materials and applications (ICEMA-2017), February 20-23, 2017, University of Allahabad.

Research Projects (Major Grants/Research Collaboration)

Major Research Projects:		
"Magneto-Optic and Plasmonic Response in magnetic core-shell structures and magnetic multilayers." <i>EMR/2016/002437</i> (PI)	Rs. 6740742 DST, SERB	March 2017 Approved
To investigate the ion beam induced modifications in structural and photocatalytic properties of SrTiO ₃ thin films. <i>DST sanction order: INT/ITALY/P-22/2016/(SP)</i>	Travel grant - DST Max. Rs. 1 Lakh per participant	Visited Elettra, Synch Trieste , Italy 17-2 2018
Awards and Distinctions		
Association With Professional Bodies		
<p>Life Member: Materials Research Society of India, (MRSI) – Executive committee, Delhi Chapter 20 Biosensor Society of India (BSI). Magnetic Society of India (MSI): Executive committee member (2012 - 15) IEEE society – IEEE magnetic: May 2018</p>		
Other Activities		
Interested in classical and light music		

Signature of Faculty Member

- You are also requested to also give your complete resume as a DOC or PDF file to be attached as a link on your faculty page.