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Educational Qualifications

Post doctoral research at University of Manitoba, Canada.
Ph.D. Jawaharlal Nehru University(JNU),Delhi, India.
M.Sc. (Physics), Indian Institute of Science(IIT), Delhi, India.

Teaching

B.Tech : Physics I (BA 111), Physics II (BA 110)
M.Tech : Mathematical Phycis (BAEP-601), Statistical Phycis (BAEP-607, BAEP-604),
Computational Physics Lab (BAEP-652, BAEP-751), Minor and Major projects
Pre Ph.D course offered : Fundamentals of nanoelectronics, Introduction to MATLAB and
Computational methods

Research Area : Mesoscopic condensed matter physics-optical and transport properties of semiconductor nanostructures, nanostructured thermoelectric materials, solar cells

Ph.D Thesis Title : Electronic and Optical Properties of III - V Nitride Based Quantum Dots

Publications in International Journals

- (i) Energy levels of nitride quantum dots : Wurtzite versus zinc-blende structure, Anjana Bagga, P.K.Chattopadhyay and Subhasis Ghosh, Physical. Review. B. 68, 155331 (2003)
- (ii) Dark and bright excitonic states in nitride quantum dots, Anjana Bagga, P.K.Chattopadhyay and Subhasis Ghosh, Physical. Review. B. 71, 115327 (2005).
- (iii) Energy Levels in spheroidal quantum dots with finite barrier heights, Anjana Bagga, Subhasis Ghosh and P.K.Chattopadhyay, Nanotechnology 16 (2005) 2726-2730

- (iv) Spin-orbit interaction in quantum cascade transition, Vadim.M.Apalkov, Anjana Bagga, Tapash Chakraborty, Physical Review B: Rapid Communications 73, 161304(R) (2006)
- (v) Origin of Stokes shift in InAs and CdSe quantum dots: Exchange splitting of excitonic states, Anjana Bagga, P.K. Chattopadhyay and Subhasis Ghosh, Physical. Review. B 74, 035341 (2006)
- (vi) Spin hot spots in vertically coupled few-electron isolated quantum dots, Anjana Bagga, Pekka Peitilainen, Tapash Chakraborty, Physical. Review. B 74, 033313 (2006)
- (vii) Tailoring of Seebeck coefficient with surface roughness effects in silicon sub-50-nm films Manoj Kumar, Anjana Bagga, S. Neeleshwar, Nanoscale Research Letters 2012, 7:169
- (viii) Controlling wave function localization in a multiple quantum well structure Anjana Bagga, Anu Venugopalan, Journal of Applied Physics 113, 054310 (2013)
- (ix) Theoretical Investigations Of Interfacial Scattering Effects On Thermoelectric Properties Of Bulk Nanostructured PbTe System, Neeleshwar Sonnathi, Anjali Panwar, Vikas Malik and Anjana Bagga, MRS Advances, DOI:10.1557/adv.2018.48 (2018)

Papers in Refereed Conference Proceedings

- (i) Stokes shift in quantum dots: origin of dark exciton, Anjana Bagga, P.K. Chattopadhyay, Subhasis Ghosh, Proceedings of IEEE : International workshop on Physics of Semiconductor Devices (IWPSD 2007) :Date:16- 20 Dec. 2007 Page(s): 876 – 879
- (ii) Surface Roughness Effects on Seebeck Coefficient in Silicon ultra thin Films, Manoj Kumar, Anjana Bagga, S.Neeleshwar, IEEE International NanoElectronics Conference (IEEE INEC 2011). Digital Object Identifier : 10.1109/INEC.2011.5991770
- (iii) Effect of Interfacial Resistances at TiO₂/TCO/Electrolyte Interfaces on Dye Sensitized Solar Cells Rakesh Ranjan, Shruti Aggarwal and Anjana Bagga, IEEE International Conference on Emerging Electronics 2012 (IEEE ICEE 2012), Digital Object Identifier : 10.1109/ICEmElec.2012.6636274
- (iv) Surface Roughness Plays a Key Role on Power Factor of sub-50 nm Thermoelectric Devices Manoj Kumar, Anjana Bagga, S. Neeleshwar, IEEE International Conference on Emerging Electronics 2012 (IEEE ICEE 2012), Digital Object Identifier : 10.1109/ICEmElec.2012.6636268