Research Profile of Physics Department:

To understand and assimilate an engineering subject it is compulsory for a student to have a spontaneous inclination towards Physics. To strengthen engineering subjects it is mandatory to carry out more and more successful researches in Physics. Our dedicated faculty members have engaged themselves in finding out new dimensions of the subject and hence quality research is a spontaneous process for them. The list of publication given below proves the fact.

Publications:

Research Papers:

1. "Charge injection mechanisms in solid state organic light-emitting devices based on alizarin violet", *S. Das, A. Chowdhury,* ***S. Roy****, A.J. Pal, Physica Status Solidi (a), Vol.178, 2000, pp.811.*

2. "Light-emitting devices based on Evans blue under alternating-current and direct-current modes: different charge injection mechanisms", ***S. Roy****, A. Chowdhury, S. Das, A.J. Pal, Synthetic Metals, Vol.113, 2000, pp.269.*

3. "Transient electroluminescence under double rectangular voltage pulses in light-emitting devices based on Evans blue", ***S. Roy****, A.J. Pal, Solid State Communications, Vol.114, 2000, pp.589.*

4. "Sequentially adsorbed layer-by-layer self assembled films: light-emitting devices based on Evans blue", ***S. Roy****, A.J. Pal, Materials Science and Engineering C Vol.18, 2001, pp.65.*

5. "Impedance characteristics of layer-by-layer electrostatic self-assembled films of Evans blue", ***S. Roy****, A.J. Pal, Materials Chemistry and Physics, Vol. 77, 2002, pp. 784.*

6. "A study of organic light-emitting devices based on electrostatic self-assembled films of Evans blue under AC voltage", ***S. Roy****, A.J. Pal, Physica Status Solidi (a), Vol. 193, No. 2, 2002, pp. 367.*

7. "Phytoplanktonic community of organically polluted tropical reservoirs in Eastern India", *S.K. Das,* ***D. Biswas****,* ***S. Roy****, Chinese Journal of Applied and Environmental Biology, Vol. 13(4), 2007, pp.449.*

8. "Use of Biotic Community Structure as a Measure of Ecological Degradation", *S.K. Das, **D. Biswas**, **S. Roy**, Chinese Journal of Applied and Environmental Biology, Vol. 13(5), 2007, pp.662.*

9. "Dependence of the individual growth process upon allometric scaling exponents and other parameters", ***D. Biswas**, S. K. Das, **S. Roy**, Journal of Biological Systems, Vol. 16, No. 1, 2008, pp.151.*

10. "Importance of scaling exponents and other parameters in growth mechanism: an analytical approach", *Published online: June 19, 2008, **D. Biswas**, S. K. Das, **S. Roy**, Theory in Biosciences (Springer), http://dx.doi.org/10.1007/s12064-008-0045-9.*

11. "Optical and structural properties of lead iodide thin films prepared by vacuum evaporation method", *(Published online: May 30, 2008), **T. Ghosh**, S. Bandyopadhyay, K. K. Roy, S. Kar, A. K. Lahiri, A. K. Maiti, K. Goswami Crystal Research Technology, (Wiley Interscience) 1–5, 2008, DOI 10.1002/crat.200811160.*

12. "Phytoplanktonic community of organically polluted tropical reservoirs in Eastern India", *S.K. Das, **D. Biswas**, **S. Roy**, Chinese Journal of Applied and Environmental Biology, Vol. 13(4), 2007, pp.449.*

13. "Use of Biotic Community Structure as a Measure of Ecological Degradation", *S.K. Das, **D. Biswas**, **S. Roy**, Chinese Journal of Applied and Environmental Biology, Vol. 13(5), 2007, pp.662.*

Books:

A Complete Course in Engineering Physics
S. Roy, T. Ghosh, D. Biswas
Volume – I & II. First Edition 2008
Published by: S. Chand & Company Ltd., New Delhi – 110055
Website: www.schandgroup.com

Area of Interest:

The following are the thrust areas where the Department is working currently:

- Growth and Characterization of Thin Films
- Mathematical Modeling of Biological Systems
- Biological Growth Modeling, Aquaculture, Limnology