

**CURRICULUM VITAE**

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Education Qualification : **M.Sc., Ph.D.(IIT Kharagpur)**  
Title of the Ph.D. thesis : **Low-dimensional Germanium structures for electronic and optoelectronic devices.**  
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➤ **List of research papers published in National/ International journals:**

<b>Serial No</b>	<b>Type of Publication</b>	<b>Name of the Journal</b>	<b>Title of the Paper</b>	<b>Year of Publication</b>	<b>Authors</b>
1	<b>International</b>	<i>Nanotechnology</i> <b>28, 29 (2017)</b>	Emission characteristics of self-assembled strained Ge <sub>1-x</sub> Sn <sub>x</sub> islands for sources in the optical communication region	2017	<b>R. Bar,</b> A. K. Katiyar, R. Aluguri, and S. K. Ray
2	<b>International</b>	<i>Appl. Sur. Sci.</i> <b>407, 418-426</b> (2017).	Surface potential, charging and local current transport of individual Ge quantum dots grown by molecular beam epitaxy	2017	R. K. Singha, S. Manna, <b>R. Bar,</b> S. Das, and S. K. Ray
3	<b>International</b>	<i>Opt. Materials</i> <b>60, 501-505</b> (2016)	Size dependent photoresponse characteristics of crystalline Ge quantum dots based photodetectors	2016	<b>R. Bar,</b> S. Manna, S. K. Ray

4	<b>International</b>	<i>Nanotechnology</i> 27, 435204 (2016)	Room temperature direct band gap emission characteristics of surfactant mediated grown compressively strained Ge films	2016	A. K. Katiyar, A. Grimm, <b>R. Bar</b> , S. Jan, T. Wietler, H. J. Osten, S. K. Ray
5	<b>International</b>	<i>Appl. Phy. Lett.</i> 109, 123105 (2016)	Growth of Au capped GeO <sub>2</sub> nanowires for visible-light photodetection	2016	A. Ghosh, P. Guha, S. Mukharjee, <b>R. Bar</b> , S. K. Ray, P. V. Satyam
6	<b>International</b>	<i>Nanotechnology</i> 27, 125701 (2016)	Tuning the work function of randomly oriented ZnO nanostructures by capping with faceted Au nanostructure and oxygen defects: enhanced field emission experiments and DFT studies	2016	A. Ghosh, P. Guha, R. Thapa, S. Selvaraj, M. Kumar, B. Rakshit, T. Dash, <b>R. Bar</b> , S. K Ray, P. V. Satyam
7	<b>International</b>	<i>Appl. Phys. Lett.</i> 107, 093102 (2015)	Multilayer Ge nanocrystals embedded within Al <sub>2</sub> O <sub>3</sub> matrix for high performance floating gate memory devices	2015	<b>R. Bar</b> , R. Aluguri, S. Manna, A. Ghosh, P. V. Satyam, S. K. Ray
8	<b>International</b>	<i>Nanotechnology</i> 26, 045202 (2015)	Enhancement of photoluminescence intensity of erbium doped silica containing Ge nanocrystals: distance dependent interactions	2015	S. Manna, R. Aluguri, <b>R. Bar</b> , S. Das, N. Prtljaga, L. Pavesi, S. K. Ray
9	<b>International</b>	<i>ACS Appl. Mater.</i>	Simple growth of faceted Au-ZnO hetero-	2015	A. Ghosh, P. Guha, A. K.

		Interfaces 7, 9486-9496 (2015)	nanostructures on silicon substrates (nanowires and triangular nanoflakes): a shape and defect driven enhanced photocatalytic performance under visible light		Samantara, B. K. Jena, <b>R. Bar,</b> S. K. Ray, P. V. Satyam
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➤ **Area of Teaching:**

- i) Mathematical physics
- ii) Classical mechanics
- iii) Quantum mechanics
- iv) Wave and oscillations
- v) Nuclear physics

