

CURRICULAR VITAE

NAME : DR. KALYAN KUMAR CHATTOPADHYAY

NATIONALITY : INDIAN

Designations : Associate Professor

Other responsibilities held : Joint Co-ordinator; Nanoscience and Technology Programme, (UPE I & UPE II); Director, School of Materials Science and Nanotechnology
JadavpurUniversity

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EDUCATIONAL QUALIFICATIONS:

Degree	University	Year	Class
B.Sc. (Phy. Hons)	Univ. of Calcutta	1985	1 st Class
M.Sc.	Univ. of Calcutta	1987	1 st Class
Ph.D.	JadavpurUniversity (IACS)	1993	Awarded

POSTDOCTORAL/ VISITING PROFESSOR/COUNTRIES VISITED:

NAME OF THE INSTITUTE	COUNTRY	PERIOD
National Institute of Materials Science (NIMS)	Tsukuba, Japan	1994 – 1995
National Institute of Materials Science (NIMS)	Tsukuba, Japan	1997-1998
HanyangUniversity	South Korea	2005
HanyangUniversity	South Korea	2008
UlstersUniversity	UK	2009

Professional Experience : 22 years research experience; 19 years Teaching experience at Postgraduate and Graduate Level

Area of Contribution : Nanoscience and Technology, Semiconductors; Low-dimensional Physics

Achievements : (i) **'h' index = 33**
(ii) **Supervised Ph.Ds = 19 (Awarded); 2 (submitted)**
(ii) **Published more than 230 research papers** in different International journals of repute
(iii) Cumulative citation of published papers **>3702**
(iv) **JSPS, COE & STA Postdoctoral Fellowship**
(v) Completed successfully six major research projects
(vi) Delivered 105 invited lectures
(vii) **Authored four books**

Technology Development :

Materials : (i) P-type transparent conducting oxide (CuAlO₂) nanostructured thin films by magnetron sputtering (first report);
(ii) Oxide nanostructures in flexible substrates; FE devices using oxide nanostructures
(iii) Development of model to explain the effect of transitional metal doping on the dielectric constant of ZnO nanostructures; (iv) Graphene based flexible electron emitter

Processes :Development of a novel process technology for the synthesis of amorphous carbon nanotubes

Research Publications :

Journals :>**231** (in referred Journals- Please see the attached list for the last five years)

Conference :> 120
Reports / Patents : Many invited book chapters
Books : Three

ANNEXURE -I

ACADEMIC HONOURS / SCHOLARSHIPS :

1. Material Research Society of India, Medal; (**MRSI Medal**), 2014
2. **Japan Society For The Promotion of Science (JSPS)** postdoctoral Fellowship Award, 1997-1999.
3. **Science and Technology (STA)** postdoctoral fellowship Award, (Govt, of Japan) - 1996 - 1997.
4. **Centre of Excellence (COE)** visiting scientist, National Institute of Materials Science (NIMS), Tsukuba, Japan, 1997.
5. **Outstanding Young Person Award**, in the field of **Science and Innovation**, Junior Chamber International (**JCI**) - 1998.
6. Center of Excellence (**COE**) Postdoctoral Fellowship Award, Science and Technology Agency (**STA**), Govt. of Japan, National Institute of Materials Science (NIMS), Tsukuba, Japan, 1994 - 1995.
7. **Young Scientist Award** from DST, Govt.of India, obtained financial support for a project (1995).
8. **Best contributed paper Award** in 7th International Workshop on Physics of Semiconductor Devices (VII-IWPSD), NPL, New Delhi, Dec. 14 - 17, 1993.
9. Research Associateship Award, CSIR, Govt. of India, 1993
10. Award of Junior Research Fellowship, Council For Scientific and Industrial Research (CSIR), Govt. of India, 1988 - 1993.
11. National Merit Scholarship Award (Dept. of Education, Govt. of India) 1979 -1987

Memberships of Academic Bodies:

1. Life Member of Materials Research Society of India
2. Life Member of Indian Association for the Cultivation of Science
3. Ordinary Member of Electron Microscope Society of India
4. Life member of Thermo-physical society of India

List of Publication (in Journals) of Dr. K. K. Chattopadhyay on Jan., 2015

230. Low temperature solution processed ZnO/CuO heterojunction photocatalyst for visible light induced photo-degradation of organic pollutants, S. Pal, S.Maiti, U.N. Maiti and K. K. Chattopadhyay

CrystEngComm (2014-In Press) (I.F: 3.858)

230. Carbon fiber-ZnS nanocomposite for dual applications as an efficient cold cathode as well as luminescent anode for display technology, Kalyan Kumar Chattopadhyay*, Arunava Jha, Sudipta Kumar Sarkar and Dipayan Sen

Nanoscale, 2014 (In-Press) (I.F: 6.739)

229. Unconventional Dexter-Silverton Type Manganese Heteropolytungstate [Mn₇(MnW₁₂O₄₂(OH)₄ · 8H₂O)] Hollow Microsphere: Synthesis, Crystal Structure, Growth Mechanism and Optical Property Study, K. Bhattacharjee, K. K.Chattopadhyay*, G. C. Das
Journal of Physical Chemistry C, 2014 (In-Press) (I.F: 4.835)

227. Effect of particle size distribution on the structure, hyperfine and magnetic properties of Ni_{0.5}Zn_{0.5}Fe₂O₄ nanopowders, K. Bhattacharjee, S. P. Pati, G. C. Das, D. Das, K. K.Chattopadhyay*

Journal of Applied Physics, 2014 (In-Press) (I.F: 2.18)

226. Ag Decorated Topological Surface State Protected Hierarchical Bi₂Se₃ Nanoflakes for Enhanced Field Emission Property, Biswajit Das, Debabrata Sarkar, Supratim Maity and Kalyan Kumar Chattopadhyay

J. Mater. Chem. C (2014-In press) (I.F: 6.101)

225. CuBO₂: A new highly transparent p-type wide band gap electron field emitter, S. Santra, N. S. Das, D. Sen, K. K.Chattopadhyay

Journal of Physics D: Applied Physics 47 (2014) 505301 (I.F: 2.59)

224. Temperature dependence of magnetization and anisotropy in uniaxial NiFe₂O₄ nanomagnets: deviation from the Callen-Callen power law, B.K. Chatterjee, C.K.Ghosh, K. K.Chattopadhyay

Journal of Applied Physics (2014-In press) (I.F: 2.18)

223. Electro-active Phase Formation in PVDF-BiVO₄ Flexible Nanocomposite Films for High Energy Density Storage Application, S. Sarkar, S. Garain, D.Mandal, K.K. Chattopadhyay

RSC Advances , 2014, 4, 48220-48227 (I.F: 3.708)

222. A first-principles investigation of oxygen reduction reaction catalysis capabilities of As decorated defect graphene, Dipayan Sen, Ranjit Thapa, Kalyan Kumar Chattopadhyay

Dalton Trans 2014,43, 15038-15047 (I.F: 4.097)

221. Tailored defect induced sharp excitonic emission from microcrystalline CuI and its ab-initio validation, Swati Das, Subhajit Saha, Dipayan Sen, Uttam Ghorai, Kalyan Kumar Chattopadhyay

J. Mater. Chem. C 2014,2, 6592-6600 (I.F: 6.101)

220. Unique quasi-vertical alignment of RGO sheets under applied non-uniform DC electric field for enhanced field emission, R. Roy, A. Jha, D. Sen, D. Banerjee, K. K. Chattopadhyay

J. Mater. Chem. C 2014,2, 7608-7613 (I.F: 6.101)

219. Theoretical insights into the electronic and magnetic behavior of the metal substituted 1H-MoS₂ system: Their potential towards CO adsorption and sensing, A. Basak, D. Das, D. Sen and K. K. Chattopadhyay

Computational Materials Science 95 (2014) 399–407 (I.F: 1.879)

218. Branch Density-Controlled Synthesis of Hierarchical TiO₂ Nanobelt and Tunable Three Step Electron Transfer for Enhanced Photocatalytic Property, Debabrata Sarkar and Kalyan K. Chattopadhyay

ACS Appl. Mater. Interfaces 2014, 6, 10044–10059 (Impact Factor: 5.9)

217. Wide band gap p-type CuBO₂ nanostructures by hydrothermal route and fabrication high quality p-CuBO₂/ n-ZnO nano-heterojunction, Saswati Santra, Nirmalya S Das, Soumen Maiti, Kalyan Kumar Chattopadhyay

Chemical Physics Letter 604 (2014) 97–100 (I.F: 1.991)

216. Interplay of bulk and surface on the magnetic properties of low temperature synthesized nanocrystalline cubic Cu_{1-x}Zn_xFe₂O₄ (x = 0.00, 0.02, 0.04 and 0.08), Biplab K. Chatterjee, Abishek Dey, Chandan K. Ghosh, Kalyan K. Chattopadhyay

Journal of Magnetism and Magnetic Materials 2014, 367, 19–32 (I.F: 2.002)

215. Rules of B-N Doping in Defect Graphene Sheet: A First-Principles Investigation of Bandgap Tuning and Oxygen Reduction Reaction Capabilities, D. Sen, R. Thapa, K. K. Chattopadhyay

Chem Phys Chem, 15 (2014) 2542-2559 (I.F: 3.360)

214. Enhanced field emission properties of PECVD synthesized chlorine doped diamond like carbon thin films, D. Banerjee, K. K. Chattopadhyay

Surface and Coatings Technology 253 (2014) 1–7 (I.F: 2.199)

213. Optical Constants, Dispersion Energy Parameters and Dielectric Properties of Ultra-smooth Nanocrystalline BiVO₄ Thin Films Prepared by RF Magnetron Sputtering, S. Sarkar, N. S. Das, K. K. Chattopadhyay

Solid State Sciences 33 (2014) 58-66 (I.F: 1.679)

212. Combined effect of oxygen deficient point defects and Ni doping in RF magnetron sputtering deposited ZnO thin films, Biswajit Saha, Nirmalya S Das and Kalyan K Chattopadhyay

Thin Solid Films (2014-In press)(I.F.: 1.867)

211. Efficient and persistent cold cathode emission from CuPc nanotubes: A joint experimental and simulation investigation, Uttam Kumar Ghorai, Swati Das, Subhajit Saha, Nilesh Mazumder, Dipayan Sen and Kalyan Kumar Chattopadhyay.

Dalton Trans 2014,43, 9260-9266 (I.F: 4.097)

210. Scalable approach for the realization of garland shaped 3D assembly of CuTCNQ nanorods: efficient electron emitter, Shreyasi Pal, Soumen Maiti, Uday Narayan Maiti, and Kalyan Kumar Chattopadhyay

Journal of Materials Chemistry C 2014,2, 4005-4011 (I.F: 6.101)

209. NiO nanosteps on Ni: Wide band gap p-type nanostructure for efficient cold cathode and magnetically separable photocatalyst, Nirmalya Sankar Das; Saswati Santra, Diptonil Banerjee, Gopes Chandra Das, Kalyan Kumar Chattopadhyay

Material Research Express 1 (2014) 025902

208. Influence of spherical assembly of copper ferrite nanoparticles on magnetic properties: Orientation of magnetic easy axis, Biplab k. Chatterjee, Kaustav Bhattacharjee, Abhishek Dey, Chandan K. Ghosh, Kalyan K. Chattopadhyay

Dalton Trans 43, 7930-7944 2014 (I.F: 4.097)

207. Improved photo detection from the annealed SiO_x-In₂-xO₃-y axial heterostructure nanocolumns, N. K. Singh, A. Mondal, J. C. Dhar, S. Chakrabarty, K .K. Chattopadhyay and A. Bhattacharyya

Journal of Physics D (2014-In press) (I.F: 2.59)

206. Easy synthesis of amorphous graphene and related hybrids for cold cathode application, D. Banerjee, N. S. Das, D. Sarkar and K. K. Chattopadhyay

CARBON 72 (2014) 4–14 (I.F: 6.160)

205. Effect of annealing on SiO_x-TiO₂ axial heterostructure nanowires and improved photodetection, J. C. Dhar, A. Mondal, N. K. Singh, S. Chakrabartty, A. Bhattacharyya and K. K. Chattopadhyay,

Journal of Applied Physics 114(2013) 244310 - 244310-6. (I.F. 2.59)

204. Self-sacrificial template directed hydrothermal route to kesterite-Cu₂ZnSnS₄ microspheres and study of its photo response property, Samrat Sarkar, Kaustav Bhattacharjee, G.C.Das and K.K.Chattopadhyay,

Cryst. Eng. Comm., (2014) 16, 2634 (I.F: 3.858)

203. Amino-functionalized Graphene Quantum Dots: Origin of Tunable Heterogeneous Photoluminescence, Kalyan Kumar Chattopadhyay, Rajarshi Roy, Gundam Sandeep Kumar, Dipayan Sen, Uttam Ghorai, Nilesh Mazumder, Subhajit Saha and Ranjit Thapa,

Nanoscale, (2014) 21;6(6):3384-91. (I.F: 6.739)

202. Highly oriented cupric oxide nanoknife arrays on flexible carbon fabric as high performing cold cathode emitter, Swati Das, Subhajit Saha, Dipayan Sen, Uttam Kumar Ghorai, Diptonil Banerjee and Kalyan Kumar Chattopadhyay,

Journal of Materials Chemistry C, (2014),2, 1321-1330 (I.F: 6.101)

201. Visible light photocatalysis and electron emission from porous hollow spherical BiVO₄ nanostructure synthesized by a novel route, S. Sarkar and K. K. Chattopadhyay,

Physica E, (2014) 58, 52-58(I.F: 2.002)

200. Ambient condition oxidation of zinc foil in supersaturated solution for shape tailored ZnO nanostructures: Low cost candidates for efficient electron emitter and UV-detector, Soumen Maiti, Uday Narayan Maiti, Avijit Chowdhury and Kalyan Kumar Chattopadhyay,

Cryst. Eng. Comm., (2014), 16, 1659-1668 (I.F: 3.858), DOI: 10.1039/C3CE42041H

199. Field emission enhancement of polypyrrole due to band bending induced tunnelling in polypyrrole-carbon nanotubes nanocomposite, Namita Dutta Gupta, Supratim Maity and Kalyan Kumar Chattopadhyay,

Journal of Industrial and Engineering Chemistry, 20 (2014) 3208–3213 (I.F: 2.063)

198. Structural and Magnetic properties of Quasi One-dimensional doped LiCuVO₄, Abhishek Kumar, Poonam Kumari, A. Das, G. D. Dwivedi, P. Shahi, K. K. Shukla, A. K. Ghosh, A. K. Nigam, K. K. Chattopadhyay and Sandip Chatterjee,

Journal of Solid State Chemistry, 208 (2013) 120-126 .(I.F:2.2)

197. Equibiaxial strain: tunable electronic structure and optical properties of bulk and monolayer MoSe₂, C K Ghosh, D Sarkar, M K Mitra and K. K. Chattopadhyay,

J. Phys. D: Appl. Phys. 46 (2013) 395304 (11pp) (I.F. 2.59)

196. Amorphous carbon nanotube/polyaniline core-shell nanostructure for efficient cold cathode application, Supratim Maity, Sumita Goswami and Kalyan Kumar Chattopadhyay,

RSC Advances, (2013) 3, 26321-26327 (I.F: 3.708)

195.Effect of trace amount amorphous carbon nanotubes on polypyrrole: A potential materia lfor field emission display, D. Banerjee, D. Nawn and K. K. Chattopadhyay,

Science of Advance Materials, (2014) 6, 640-647(8) (I.F :3.8)

194. Realizing Direct Gap, Polytype, Group IIIA Delafossite: Ab Initio Forecast and Experimental Validation Considering Prototype CuAlO₂, Nilesh Mazumder, Dipayan Sen, Uttam K. Ghorai, Rajarshi Roy, Subhajit Saha, Nirmalya S. Das and Kalyan K. Chattopadhyay,

Journal of Physical Chemistry Letters 2013, 4, 3539–3543 (I.F: 6.687)

193. Organic nanowires hierarchy over fabric platform for flexible cold cathode, Soumen Maiti,Uday Narayan Maiti, Shreyasi Pal and Kalyan Kumar Chattopadhyay,

Nanotechnology 24 (2013) 465601 (8pp) (I.F: 3.679)

192.Improvement of adhesion and continuity of Polypyrrole thin films through surface modification of hydrophobic substrates, Namita Dutta Gupta,Swati Das, Nirmalya Sankar Das, Diptonil Banerjee, Debarata Sarkar and Kalyan Kumar Chattopadhyay,

Journal of Applied Polymer Science (2014), 131, 39771. (I.F: 1.600)

191. Charge compensation assisted enhanced photoluminescence derived from Li-codoped MgAl₂O₄: Eu³⁺ nanophosphors for solid state lighting applications, Subhajit Saha, Swati Das, Uttam Kumar Ghorai, Nilesh Mazumder, Bipin Kumar Gupta and Kalyan Kumar Chattopadhyay,

Dalton Transactions , 2013, 42, 12965 (I.F: 4.097)

190. Ni–Zn ferrite-loaded superparamagnetic amorphous carbon nanotubes through a facile route, K. Bhattacharjee, S. Maity, G. C. Das and Kalyan Kumar Chattopadhyay,

Colloid and Polymer Science, (2013) 291:2589–2597 (I.F: 2.410)

189. Controlling the ZnO tetrapod sharpness by restricted zinc oxidation in open air: Low turn-on field emission stabilized by graphene, Soumen Maiti, Uday Narayan Maiti, Bhaskar Chandra Behera, Shreyasi Pal and Kalyan Kumar Chattopadhyay,

Journal of Materials Chemistry C2013,1, 4940-4947 (I.F: 6.101)

188. Electrical properties of vertically oriented TiO₂ nanowire arrays synthesized by glancing angle deposition technique, A. Mondal, J. C. Dhar, P. Chinnamuthu, N. K. Singh, K. K. Chattopadhyay, S. K. Das, S. C. Das, A. Bhattacharyya,

Electronic Materials Letters(2013), 9, p. 213-217 (I.F: 3.977)

187. Controlled surface damage of amorphous and crystalline carbon nanotubes for enhanced field emission, Supratim Maity, Nirmalya Sankar Das, and Kalyan Kumar Chattopadhyay,

Physica Status Solidi (b), (2013) 250 (9), 1919-1925(I.F: 1.489)

186. Wide band gap p-type nanocrystalline CuBO₂ as a novel UV photocatalyst, S. Santra, N. S. Das and K. K. Chattopadhyay,

Materials Research Bulletin 48 (2013) 2669–2677(I.F: 1.968)

185. Synthesis of SnO₂ functionalized amorphous carbon nanotube for efficient electron field emission application, D. Banerjee, D. Nawn and K. K. Chattopadhyay,

Journal of Alloys and Compounds 572 (2013) 49–55(I.F: 2.726)

184. Enhanced photocurrent from generated photothermal heat in indium nanoparticles embedded TiO₂ film, B. Choudhuri, A. Mondal, J. C. Dhar, N. K. Singh, T. Goswami, and K. K. Chattopadhyay,

Appl. Phys. Lett. 102, 233108 (2013)(I.F: 3.515)

183. Enhanced Ultraviolet Emission from Mg Doped SnO₂ Nanocrystals at Room Temperature and Its Modulation upon H₂ Annealing, Nilesh Mazumder, Dipayan Sen, Subhajit Saha, Uttam Kumar Ghorai, Nirmalya Sankar Das and Kalyan Kumar Chattopadhyay*,

J. Phys. Chem. C 2013, 117, 6454–6461(I.F: 4.835)

182. Synthesis, Characterization and High Natural Sunlight Photocatalytic Performance of Cobalt Doped TiO₂ nanofibers, Debabrata Sarkar, S. Mukherjee, Kalyan K. Chattopadhyay,

Physica E 50 (2013) 37–43 (I.F: 2.002)

181. Zinc oxide nanostructure decorated amorphous carbon nanotubes: An improved field emitter, D. Nawn, D. Banerjee and K. K. Chattopadhyay,

Diamond and Related Materials, 34 (2013) 50–59(I.F: 1.572)

180. Enhanced photoemission from glancing angle deposited SiO_x-TiO₂ axial heterostructure nanowire arrays, J. C. Dhar, A. Mondal, N. K. Singh, and K. K. Chattopadhyay,

J. Appl. Phys. 113, 174304 (2013) (I.F: 2.185)

179. Single crystalline nanostructures of giant dielectric calcium copper titanate: A convenient route towards materialization of hard to realize multicomponent perovskite nanostructures , Arindam Sen, Uday Narayan Maiti, Soumen Maiti, Kalyan Kumar Chattopadhyay*,

J. Materials Science, 48, 11, (2013) 3967-3974 (I.F: 2.305) I.F: 5.900

178. Three dimensional Ag₂O/TiO₂ type-II (p-n) nanoheterojunctions for superior photocatalytic activity, Debabrata Sarkar, Chandan. K. Ghosh, S. Mukherjee, Kalyan K. Chattopadhyay*,

ACS Appl. Mater. Interface (2013) 5 (2) , pp. 331-337. Most Read Article (I.F: 5.900)

177. Small Pd cluster adsorbed double vacancy defect graphene sheet for hydrogen storage: A first-principles study, D. Sen, R. Thapa and K. K. Chattopadhyay*,

International Journal of Hydrogen Energy 38 (2013) 3041-3049.(I.F: 2.930)

176. Simple chemical synthesis of porous carbon spheres and its improved field emission by water vapor adsorption, D. Banerjee, D. Sen and K.K. Chattopadhyay*,

Microporous and Mesoporous Materials, 171 (2013) 201–207.(I.F: 3.209)

175. Edge effect enhanced electron field emission in top assembled reduced graphene oxide assisted by amorphous CNT-coated carbon cloth substrate, Rajarshi Roy, Arunava Jha, Diptonil Banerjee, Nirmalya Sankar Das and Kalyan Kumar Chattopadhyay*,

AIP Advance (2013) 3, 012115.(I.F: 1.349)

174. Surface modification of amorphous carbon nanotubes with Copper phthalocyanine leading to enhanced field emission, A. Jha, U. K. Ghorai, D. Banerjee, S. Mukherjee and K. K. Chattopadhyay*,

RSC Advance (2013) 3 (4), pp. 1227-1234.(I.F: 3.708)

173. Polyaniline/Vanadium oxide composites: An effective control in morphology by varying reactant concentrations, S.Goswami, U.N. Maiti, S. Maiti, M.K. Mitra, K.K. Chattopadhyay*,

Materials Chemistry and Physics (2013) 138 319-326.(I.F: 2.129)

172. Sol-gel synthesis and characterization of wide band gap p-type nanocrystalline CuBO₂, S. Santra, N. S. Das and K. K. Chattopadhyay*,

Materials Letters,(2013) 92, pp. 198-201.(I.F: 2.269)

171. Three dimensional ZnO nanostructures realized through polymer mediated aqueous chemical route: Candidate for transparent flexible electronics, Soumen Maiti, Uday Narayan Maiti and Kalyan Kumar Chattopadhyay*,

Cryst Eng Comm (2012) 14 (23) , pp. 8244-8252.(I.F: 3.858)

170. Chemically derived graphene sheets top assembled over multi-walled carbon nanotube thin film by Langmuir Blodgett method for improved dual field emission,Rajarshi Roy, Arunava Jha, Kalyan K. Chattopadhyay*,

Journal of Nanoscience & Nanotechnology13. 1 (2013) 452-460(9) (I.F: 1.149)

169. Template free synthesis of mesoporous CuO nano architects for field emission applications, Swati Das, Soumen Maiti, Subhajit Saha, Nirmalya Sankar Das and Kalyan Kumar Chattopadhyay*,

Journal of Nanoscience & Nanotechnology (2013) 13, 1–7.(I.F: 1.149)

168. Fabrication of barium/strontium carbonate coated amorphous carbon nanotubes as an improved field emitter, S. Maity, A. Jha, N. S. Das and K. K. Chattopadhyay*,

Applied Physics A (2013) 110:493–499. I.F: 1.694

167. Sol-Gel derived ZnO:Mn nanocrystals: study of structural, Raman, and optical Properties, S. Kumar, S. Chatterjee, K.K. Chattopadhyay and A.K. Ghosh,**Journal of Physical Chemistry C, 116 (2012) p. 16700 – 16708.(I.F: 4.835)**

166. Thickness optimized nanocrystalline ZnO coated silicon nanowires for cold cathode application, N. S. Das, D. Banerjee and K. K. Chattopadhyay*,

Journal of Materials Science (2012) 48 (2) , pp. 750-757.(I.F: 2.305)

165. Structural and optical properties of glancing angle deposited TiO₂ nanowires array, P.Chinnamuthu, A. Mondal, N. K. Singh, J.C.Dhar, S.K. Das, K. K.Chattopadhyay,

J. Nanoscience and Nanotechnology. 12, 6445 (2012)(I.F: 1.149)

164. Synthesis of crystalline carbon nanofern-like structure by dc-PECVD and study of its electrical and field emission properties, D. Banerjee and K.K. Chattopadhyay*,

Materials Research Bulletin (2012) 47 (11), pp. 3868-3874. (I.F: 1.968)

163. Stable Dispersion of Functionalized Amorphous Carbon Nanotubes in Different Liquids, D. Banerjee, A. Jha and K. K. Chattopadhyay*,

Journal of Nanofluids (2013) Vol. 1, pp. 28–35.

162. Enhancement of Field Emission and Hydrophobic Properties of Silicon Nanowires by Chemical Vapor Deposited Carbon Nanoflakes Coating, D. Banerjee, N. S. Das, K.K. Chattopadhyay*,

Applied Surface Science (2012) 261, pp. 223-230. (I.F: 2.538)

161. Band gap enhancement of glancing angle deposited TiO₂ nanowire array, P. Chinnamuthu, A. Mondal, N. K. Singh, J. C. Dhar, K. K. Chattopadhyay*, S. Bhattacharya,

Journal of Applied Physics (2012) 112 (5), art. no. 054315. (I.F: 2.185)

160. Anatase TiO₂ nanoparticles synthesis via simple hydrothermal route: Degradation of Orange II, Methyl Orange and Rhodamine B; R. Thapa, S. Maiti, T. H. Rana, U. N. Maiti, and K. K. Chattopadhyay*,

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159. Structural and optical properties of glancing angle deposited TiO₂ nanowires array, P. Chinnamuthu, A. Mondal, N. K. Singh, J. C. Dhar, S. K. Das and K K Chattopadhyay*,

Journal of Nanoscience & Nanotechnology (2012) 12, pp. 6445-6448(I.F: 1.149)

158. Electronic structure and optical properties of CuAlO₂ under biaxial strain, C.K. Ghosh, D. Sarkar, M.K. Mitra and K.K. Chattopadhyay*,

Journal of Physics: Condensed Matter 24 (2012) p. 235501.(I.F: 2.223)

157. Synthesis and characterization of water soluble functionalized amorphous carbon nanotube - polyvinyl alcohol composite, D. Banerjee, A. Jha and K.K. Chattopadhyay*,

Macromolecular Research 20 (2012), pp. 1021-1028 (I.F: 1.682)

156. Site dependent metal adsorption on (3x3) h-BN monolayer: Stability, Magnetic and Optical properties, D. Sen¹, R. Thapa, K. Bhattacharjee and K. K. Chattopadhyay*,

Computational Materials Science, 51 (2012) 165-171. (I.F: 1.879)

155. An ambient condition, one pot route for large scale production of ultrafine (< 15 nm) ZnO nanowires from commercial zinc exhibiting excellent recyclable catalytic performance: Approach extendable to CuO nanostructures, Uday Narayan Maiti, Soumen Maiti and Kalyan Kumar Chattopadhyay*,

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154. Structural transformation from Mn₃O₄ nanorods to nanoparticles and band gap tuning via Zn doping, A, Jha, R. Thapa, and K.K. Chattopadhyay*,

Materials Research Bulletin, *47* (2012) 813–819 (I.F: 1.968)

153.Effect of Cr doping on the ac electrical properties of MgAl₂O₄ nanoparticles, S. Saha, B. Das, N. Mazumder, A. Bharati and K.K. Chattopadhyay*,

Journal of Sol-gel Science and Technology (2012) 61:518–526 (I.F: 1.547)

152. Morphology control of rutile TiO₂ hierarchical architectures and their excellent field emission properties, Debabrata Sarkar, Chandan. K. Ghosh, Kalyan K. Chattopadhyay* **CrystEngComm**, 2012,14, 2683-2690 (TOP 10 DOWNLOADED ARTICLE) (I.F: 3.858)

151. Ultra-thin graphene edges at the nanowire tips: A cascade cold cathode with two-stage field amplification, U.N. Maiti, S. Maiti, T. Palmajumder and K.K. Chattopadhyay*,

Nanotechnology , *22* (2011) 505703 (I.F: 3.762)

150. Effect of Mg doping on the electrical properties of SnO₂ nanoparticles, N. Mazumder, A. Bharati, S. Saha, D. Sen and K. K. Chattopadhyay*,

Current Applied Physics, *12* (2012) 975-982 (I.F. : 2.026)

149. Size Dependent Optical and Dielectric Properties of BiVO₄ Nanocrystals, S. Sarkar and K.K. Chattopadhyay*,

Physica E (In Press) (I.F: 2.002)

148. Spectroscopic ellipsometric studies on the optical properties of phosphorus doped nanocrystalline NiO thin films, N.S. Das, B. Saha, R. Thapa and K.K. Chattopadhyay,

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