LIST OF PEER REVIEWED PUBLICATIONS

INDRANIL MANNA

(As on December, 2016)

Dissertations

1. **Mechanism and Kinetics of Discontinuous Transformations**
   Premchand Roychand Scholarship (P.R.S.) thesis (1998), Calcutta University
   Supervisor: Self
2. **Some Aspects of Discontinuous Transformations in Pb-Sn and Cu-Ag Alloys**
   Doctoral (Ph.D.) Thesis (1990), I.I.T., Kharagpur
   Supervisor: Prof. S. K. Pabi
3. **Development of Cube Texture and Recrystallisation Behaviour Study in Cu Bearing soft Magnetic Ni-Fe Alloys**
   Master's (M. Tech.) Thesis (1984), I.I.T., Kanpur
   Supervisors: Prof. K. P. Gupta and Prof. R. K. Ray
4. **Effect of Thermal Cycling on Fe-Ni-Mn Maraging Steels**
   Bachelor's (B.E.) Thesis (1983), University of Calcutta, B.E. College
   Supervisors: Late P. P. Das and Prof. S. N. Basu

Book/Journal Edited

1. Rajat Banerjee, **Indranil Manna**
   Ceramic Nanocomposites: Properties and Applications
   To be published by Woodhead publisher, London, CRC press (volume in press, 2013)
2. J Dutta Majumdar, **I. Manna**
   Laser-Assisted Fabrication of Materials
   Hardback Book, Publisher: Springer-Verlag Berlin and Heidelberg GmbH & Co. KG
   ISBN-13: 9783642283581
3. J Dutta Majumdar, S Pityana, V S Raja, Y Zhang, R Sing, **I. Manna** (Guest Editors)
   Corrosion of Alloys Developed by Non-equilibrium Processing" (Special Issue) under International Journal of Corrosion (Hindwai Publishing Corporation Ltd.) 2012
4. J Dutta Majumdar, S. Sun, I. Smurov, **I. Manna** (Guest Editors)
   A special issue on "Advances in Metallic Materials Processing" under the Advanced Materials Science and Engineering series (Hindwai Publishing Corporation Ltd.) 2011
5. **I. Manna**, Guest Editor
   SURFACE ENGINEERING OF STEEL – Two special issues of STEEL TECH, a quarterly journal on Steel Technology, Editor: Dr Amit Chatterjee (August and October 2008).
6. **I. Manna**, Guest Editor
   NANO SCIENCE AND TECHNOLOGY – A special issue of the Transactions of the Indian Institute of Metals, vol. 58 (6) (2005) pp. 939-1227 (27 articles, 288 pages).

Patents

1. **A Process for Surface Hardening of Low-Carbon Steel by Using High Powder Diode Laser Beam Adaptable to Automotive Components**
   An application for an Indian patent (825/Kol/2010) *filed on 10 July 2010, in collaboration with Tata Steel and ARCI Hyderabad, under review.*
   I. Manna, B. Syed, A. Haldar, G Padmanabhan
2. **A Device for measuring the Thermal Conductivity of a fluid with dispersion of ultra-fine solid particles**
   An application for an Indian patent (390/Kol/2005) *filed in February 2005, under review.*
   I. Manna, P. K. Das and M. Chopkar
3. **Development of Nano-intermetallic Dispersed Al-matrix Composites from the Al-Cu-X Ternary Metastable Precursors**
   Indian patent granted on January 20, 2006 (Application No. 355/Cal/2000 filed in Kolkata, June 2000).
   I. Manna, P. P. Chattpopadhyay and S. K. Pabi

Book Chapters Authored

1. Gayatri Paul, **Indranil Manna** (2013): **Science and Technology of Nanofluids - Part 1: Introduction, Application and Rheological Properties; and Part 2: Synthesis and Thermal Properties,** Invited chapter in ***Ceramic Nanocomposites: Properties and Applications***, to be published by Woodhead Publisher, London, CRC press (Editors: Rajat Banerjee, **Indranil Manna**)
2. J. Dutta Majumdar and **I. Manna** (2010): '**Corrosion Protection by Laser Surface Modification**' (accepted as an invited article), Corrosion Reviews (eds.: Dr. B. Raj and Dr. U. Kamachi Mudali), Narosa Publishing House, N. Delhi..
3. J. Dutta Majumdar and **I. Manna** (2010): 'Laser Surface Engineering'(as an invited article), Surface Engineering (eds. D. Srinivasa Rao and S. V. Joshi), Centre for Science and Technology of the Non-Aligned & other Developing Countries (NAM S&T Centre), 2010, Daya Publishing House, N. Delhi.

Peer Reviewed Papers
[A] In Archival Journals

2016

1. S. Nath, **I. Manna**, S. K. Ray, J. D. Majumdar
   Studies on nanotribological and oxidation resistance properties of yttria stabilized zirconia (YSZ), alumina (Al2O3) based thin films developed by pulsed laser deposition
   Ceramics International, **42** (2016) 7060-7071
2. Gayatri Paul, Prasanta Kumar Das, **Indranil Manna**

Synthesis, characterization and studies on magneto-viscous properties of magnetite dispersed water based nanofluids
Journal of Magnetism and Magnetic Materials, **404** (2016) 29-39

3. M. Das, V. K. Balla, T. S. Sampath Kumar, A. Bandyopadhyay, **I. Manna**
Tribological, electrochemical and in vitro biocompatibility properties of SiC reinforced composite coatings
Materials & Design, **95** (2016) 510-517
4. Gayatri Paul, Prasanta Kumar Das, **Indranil Manna**
Assessment of the process of boiling heat transfer during rewetting of a vertical tube bottom flooded by alumina nanofluid
International Journal of Heat And Mass Transfer, **94** (2016) 390-402

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5. G. Paul, P.K. Das, **I. Manna**
Rewetting of Vertical Pipes by Bottom Flooding Using Nanofluid as a Coolant
Journal of Heat Transfer, **137** (2015) Article number 121009
6. G. Telasang, J. Dutta Majumdar, N. Wasekar, G. Padmanabham, **I. Manna.**
Microstructure and Mechanical Properties of Laser Clad and Post-cladding Tempered AISI H13 Tool Steel
Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, (2015) 13p
7. S. Nath, **I. Manna,** J. D. Mazumdar
Nanomechanical behavior of yttria stabilized zirconia (YSZ) based thermal barrier coating
Ceramics International, **41** (2015) 5247-5256
8. G. Telasang, J. D. Majumdar, G. Padmanabham**, I. Manna**
Wear and corrosion behavior of laser surface engineered AISI H13 hot working tool steel
Surface & Coatings Technology, **261** (2015) 69-78
9. T. Rakshit, **I. Manna,** S. K. Ray
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Journal of Applied Physics, **117** (2015) Article: 025704
10. G. Paul, P. K. Das, **I. Manna,**
Droplet oscillation and pattern formation during Leidenfrost phenomenon
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11. G. Paul, P. K. Das, **I. Manna**
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Applied Physics Letters, **105** (2014) Article Number: 183108
12. G. Telasang, J. Dutta Majumdar, G. Padmanabham, M. Tak, **I. Manna**
Effect of laser parameters on microstructure and hardness of laser clad and tempered AISI H13 tool steel
Surface & Coatings Technology, **258** (2014) 1108-1118

13. S. K. Sinha, S. K. Ray, **I. Manna**
Effect of Al doping on structural, optical and electrical properties of SnO2 thin films synthesized by pulsed laser deposition
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14. S. Nath, **I. Manna,** J. D. Majumdar.
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Corrosion Science, **88** (2014) 10-22

15. T. Rakshit, S. Santra, **I**. **Manna,** S.K Ray
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20. S.K. Karak, J. Dutta Majumdar, Z. Witczak, W. Lojkowski, L. Ciupinski, K.J. Kurzydlowski and **I. Manna**
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Metallurgical and Materials Transactions A – Physical Metallurgy and Materials Science, **44A** (2013) 2884-2894

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28. Rakshit, T, **I. Manna**, Ray, S.K
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29. Balla, V.K., Das, M., Bose, S., Janaki Ram, G.D., **I. Manna**
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43. A. Basu, J. Dutta Majumdar, **I. Manna**
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44. T. Rakshit, S. Mandal, P. Mishra, A. Dhar, **I. Manna**, S. K. Ray
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49. J.Dutta Majumdar, I. Smurov, **I. Manna**
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