Dr Sukhendu Jana

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Expertise

Multidisciplinary Physics

He has highly experienced in Thin Film deposition and characterization methods. His research interest is in the area of c-Si Solar cells, Diamond-like Carbon Nanocomposite, Silicon Nanowire, Sensors, etc. He is acting as IPR Coordinator and Innovation Ambassador (advanced level) trained by MoE Innovation cell, GOI. He is one of the founder members of the Centre of Advanced Research in Renewable Energy and Sensor Technology (CARREST) under MSIT.

Work experience

1. ### Meghnad Saha Institute of Technology 2008 — Present

   Assistant Professor
   South 24 Parganas

2. ### Techno International New Town 2006 — 2008

   Lecturer
   24 Paraganas North

Education

1. ### PhD - 2020

   Indian Institute of Engineering Science and Technology, Shibpur

2. M.Sc - 2005

   University of Calcutta

3. B.Sc (Hons) - 2002

   St. Paul's Cathedral Mission College

4. Higher Secondary - 1999

   Mugberia Gangadhar High School

5. Secondary - 1997

   Mugberia Gangadhar High School

Honours and Awards

1. Global Jury - 2023

   Wadhwani Foundation

2. Smart India Hackathon 2022 Winner (Team Mentor) - 2022

   Innovation Cell, Ministry of Education, Govt. of India.

3. Innovation Ambassador (Advanced Level) - 2021

   Innovation Cell, Ministry of Education, Govt. of India.

4. "One of the outstanding paper abstract" - 2020

   GPVSEC-30, South Korea.

5. Best Poster Paper award in Materials Science Section - 2011

   Indian Science Congress

6. Highest Marks in Physics (Hons) at College Level - 2002

   St. Pauls' C. M. College, University of Calcutta

Research Project

Incorporation of DLN in a solar cell structures as a replacement of silicon nitride.

Role: Co-PI
Year 2016, Amount 14100000

Membership In Professional Bodies

1. Indian Carbon Society, 2022
   Life Member

2. Materials Research Society of India (MRSI), 2021
   Life Member

3. Solar Energy Society of India (SESI), 2020
   Life Member

4. Renewable Energy Society of India (RESI), 2019
   Member

5. DST Solar PV Hub, Govt. of India., 2017
   Member

6. Indian Science Congress Association (ISCA), 2011
   Member

7. Forum of Scientists, Engineers and Technologists (FOSET), 2010
   Member

Membership In Committees

1. Institute Mentoring and MAR Committee, 2023
   Jt. Coordinator

2. Kalam Program for IP Literacy and Awareness (KAPILA, MSIT), 2022
   Convener

3. Semiconductor Science and Technology, IOP., 2021
   Reviewer

4. SCIREA Journal of Energy, 2021
   Editorial Member

5. Institute Website Development Committee, 2020
   Member

6. SN Applied Sciences, Springer., 2020
   Reviewer

7. Institute NISP Committee, 2020
   Member

8. Institute NBA Implementation Committee, 2019
   Member

9. Institution Innovation Council (IIC, MSIT), 2019
   IPR Coordinator

10. Characterization and Application of Nanomaterials, 2018
    Editorial Member

11. Student Mentoring Coordination Committee, 2018
    Coordinator

12. Institution Innovation and Entrepreneurship Development Cell, 2015
    Member

Patent

1. IoT Based Hypocaust System
   Inventor(s): Ramesh Chandra Panda, Vijaya Choudhury, Manish Prateek, Sukhendu Jana, Akkenapali prem Ram, Assignee:
   Published: 2022-03-11

2. A method for deposition of C60 embedded diamond-like nanocomposite thin film
   Inventor(s): Sukhendu Jana, Sayan Das, Debasish De, Utpal Gangopadhyay, Assignee:
   Published: 2022-07-22

Publication

1. ## Futuristic Trends in Renewable & Sustainable Energy (Edited Book)

   Sukhendu Jana, et al.
   Futuristic Trends in Renewable & Sustainable Energy, Volume 2, Year 2022, Pages

2. ## Fabrication and Mathematical Modelling of a ITO-Al2O3-Si SIS Solar Cell

   Kaustuv Dasgupta, Sukanta Bose, Anup Mondal, Sukhendu Jana and Utpal Gangopadhyay
   Silicon, Volume , Year 2022

3. ## Diamond-like Nanocomposite thin film as antireflection coating on solar cells

   Sukhendu Jana, Sayan Das, Debasish De, Utpal Gangopadhyay
   Global Conference on Nanotechnology (GCNT-2022), Volume , Year 2022, Pages

4. ## C60 embedded diamond-like nanocomposite thin film

   Sukhendu Jana; Sayan Das ;De D.;Shakti N.;Mondal A.;Bhattacharya S.;Gongopadhyay U.
   Carbon Letters, Volume 32, Year 2022, Pages 193-200

5. ## Effect of diamond-like nanocomposite as antireflection layer on multi-crystalline silicon solar cells

   De D.;Adhikary K.; Sukhendu Jana; Das S.;Gangopadhyay U.
   Materials Today: Proceedings, Volume 39, Year 2019, Pages 2046-2049

6. ## Low temperature growth of diamond-like nanocomposite films prepared by PACVD from Ar diluted siloxane plasma

   Sayan Das; Sukhendu Jana;De D.;Gangopadhyay U.;Mondal A.
   Materials Research Express, Volume 6, Year 2019

7. ## Towards reliability enhancement of graphene FET biosensor in complex analyte: Artificial neural network approach

   Basu J.;Samanta N.;Jana S.;RoyChaudhuri C.
   Microelectronics Reliability, Volume 91, Year 2018, Pages 154-159

8. ## Characterization and applications of diamond-like nanocomposites: A brief review

   Kalyan Adhikary, Sayan Das, Debasish De, Anup Mondal, Utpal Gangopadhyay, Sukhendu Jana
   Characterization and Application of Nanomaterials, Volume 3, Year 2018, Pages 30-39

9. ## Diamond-like nanocomposite: a novel promising carbon based thin film as antireflection and passivation coating for silicon solar cell

   Jana S.;Das S.;De D.;Mondal A.;Gangopadhyay U.
   Materials Research Express, Volume 5, Year 2018

10. ## Multicrystalline Silicon Texturing by Novel Bi-Component Etching Solution

Nandy S.;Bhattacharya S.;Das S.;Jana S.;Gangopadhyay U.
Materials Today: Proceedings, Volume 4, Year 2017, Pages 12671-12677

11. ## Texturization of Multi Crystalline Silicon without Conventional Alkaline and Acidic Solution for Solar Cell Processing

    Pal B.;Ray S.;Jana S.;Das S.;Gangopadhyay U.;Ray P.
    Materials Today: Proceedings, Volume 4, Year 2017, Pages 12684-12688

12. ## Fabrication of Nanowire on micro Textured Crystalline Silicon Wafer before and after Diffusion Process: A comparative study of solar cell performance

    Ray S.;Ghosh S.;Ghosh H.;Mitra S.;Banerjee C.;Mondal A.K.;Saha H.;Jana S.;Das S.;Pal B.;Gangopadhyay U.
    Materials Today: Proceedings, Volume 4, Year 2017, Pages 12678-12683

13. ## Effect of annealing on structural and optical properties of diamond-like nanocomposite thin films

    Sukhendu Jana, Sayan Das, Debasish De, Utpal Gangopadhyay, Prajit Ghosh, Anup Mondal
    Applied Physics A: Materials Science and Processing, Volume 114, Year 2014, Pages 965-972

14. ## Sensing of atmospheric pollutant NO2 using nanostructured plasma polymerized thin film

    S.Das, S. Jana, U. Gangopadhyay, A.Mondal, D.De, P.Ghosh
    101 Indian Science Congress, Volume Feb 3-7, 2014, Year 2014, Pages

15. ## Encapsulation of SiNWs Array with Diamond-like Nanocomposite Thin Film for Ultra-low Reflection

    Sukhendu Jana, Sayan Das, Debasish De, S Garain, S Ray, Utpal Gangopadhyay, Prajit Ghosh, A Mondal
    Physics of Semiconductor Devices, Volume , Year 2014, Pages 327-330

16. ## A Novel Room Temperature Ammonia Gas Sensor Based on Diamond-Like Nanocomposite/c-Silicon Heterojunction

    Sayan Das, Sukhendu Jana, Debasish De, Utpal Gangopadhyay, Sutapa Garain, Soma Ray, Anup Mondal, Prajit Ghosh
    Physics of Semiconductor Devices, Volume , Year 2014, Pages

17. ## Synthesis of Ammine (NH2)–Functionalized Silazane Based Plasma Polymer by rf-PACVD Technique as a Promising Bio-sensing Film

    S Das, S Jana, D De, S Garain, S Ray, U Gangopadhyay, A Mondal
    International Journal of Adamas Technical Review, Volume 1, Year 2014, Pages

18. ## State of art of super capacitor

    Soma Ray, Sutapa Garain, Sayan Das, Sukhendu Jana, Debasish De, Utpal Gangopadhyay
    International Journal of Research in Computer Engineering and Electronics, Volume 3, Year 2014, Pages 1

19. ## Effect of Dispersity on Polyurethane’s Property and Micro structure

    Debasish De, Sayan Das, Sukhendu Jana and Utpal Gangopadhyay
    International Conference on Structural and Physical Properties of Solids , Volume (SPPS),ISM Dhanbad,

Year 2013, Pages

20. Diamond-like Nanocomposite: A Promising Material as Anti-Reflection Coating on Si Based Solar Cell

Sukhendu Jana, Sayan Das, Debasish De, Utpal Gangopadhyay and Anup Mondal
International Conference on Structural and Physical Properties of Solids, Volume (SPPS),ISM Dhanbad,2013, Year 2013, Pages

21. Anti-reflective nanocomposite based coating for crystalline silicon solar cells with noticeable significance

Gangopadhyay U.;Jana S.;Das S.;Ghosh P.;Mondal A.
Journal of Renewable and Sustainable Energy, Volume 5, Year 2013, Pages

22. A clue to understand environmental influence on friction and wear of diamond-like nanocomposite thin film

Jana S.;Das S.;Gangopadhyay U.;Mondal A.;Ghosh P.
Advances in Tribology, Volume , Year 2013

23. Large-Area Crystalline Silicon Solar Cell Using Novel Antireflective Nanoabsorber Texturing Surface by Multihollow Cathode Plasma System and Spin-On Doping

Utpal Gangopadhyay, Sukhendu Jana, Sayan Das
ISRN Renewable Energy, Volume , Year 2013, Pages

24. Novel and efficient texturing approach for large-scale industrial production line of large-area monocrystalline silicon solar cell

Utpal Gangopadhyay, Sukhendu Jana, Sayan Das
, Volume 2, Year 2013, Pages

25. Deposition and characterization of diamond-like nanocomposite coatings grown by plasma enhanced chemical vapour deposition over different substrate materials

Mallik A.K.;Dandapat N.;Ghosh P.;Ganguly U.;Jana S.;Das S.;Guha K.;Rebello G.;Lahiri S.K.;Datta S.
Bulletin of Materials Science, Volume 36, Year 2013, Pages 193-202

26. Efficiency enhancement of Solar Cell by introduction of Cerium Oxide along with Silicon Nitride

Utpal Gangopadhyay, Soma Ray, Esha Panda, Sukhendu Jana, Sayan Das
International Journal of Renewable and Sustainable Energy, Volume 2, Year 2013, Pages 46

27. State of art of solar photovoltaic technology

Utpal Gangopadhyay, Sukhendu Jana, and Sayan Das
Conference papers in science, Volume , Year 2013, Pages

28. Frequency response of Diamond-like Nanocomposite thin film based MIM capacitor and equivalent circuit modelling

Sukhendu Jana, Sayan Das, Utpal Gangopadhyay, Prajit Ghosh, Anup Mondal
, Volume 1, Year 2012, Pages

29. Antireflective Nanocomposite Based Coating on Crystalline Silicon Solar Cells for Building-Integrated Photovoltaic Systems

    Utpal Gangopadhyay, Sukhendu Jana, Sayan Das, Sutapa Garain, and Soma Ray
    Conference Papers in Energy, Volume 2012, Year 2012, Pages

30. State of art of nanotechnology

    Utpal Gangopadhyay, Sayan Das, Sukhendu Jana, Prajit Ghosh
    International Journal of Engineering Research and Development, Volume 3, Year 2012, Pages

31. Feasibility of n-type crystalline silicon wafer for fabricating Industrial Silicon Solar Cell with significant acceptable efficiency in near future

    U Gangopadhyay, S Das, S Jana, P Ghosh
    IOSR Journal of Engineering (IOSRJEN), Volume 2, Year 2012, Pages 01-06

32. Comparative simulation study between n-type and p-type Silicon Solar Cells and the variation of efficiency of n-type Solar Cell by the application of passivation layer with different thickness using AFORS HET and PC1D

    U Gangopadhyay, S Roy, S Garain, S Jana, S Das
    IOSR Journal of Engineering , Volume 2, Year 2012, Pages 2250

33. Study of ICP-CVD grown Amorphous and Microcrystalline Silicon thin films in HIT structure

    U Gangopadhyay, S Das, S Jana
    International Journal of Engineering Research and Development, Volume 2, Year 2012, Pages 48-52

34. Biomedical Applications of Diamond-Like Nanocomposite Coatings: An Advanced Nanocomposite Material

    Sayan Das, Sukhendu Jana, Utpal Gangopadhyay, Prajit Ghosh.
    International Conference on Biomaterials and Implants: Prospects and Possibilities in the New Millennium, Volume , Year 2011, Pages

35. Diamond like nanocomposite film: a promising materials for MEMS and related device

    Sukhendu Jana, Sayan Das, Utpal Gangopadhyay and Prajit Ghosh
    International Conference on Biomaterials and Implants: Prospects and Possibilities in the New Millennium, Volume , Year 2011, Pages

36. Characteristics of bonding structures in Diamond-like Nanocomposite film deposited by RF-PECVD technique at different Argon gas ambience

    S. Das, S. Jana, P. Ghosh and U. Gangopadhyay
    98th Indian Science Congress, Volume , Year 2011, Pages

37. Diamond like nanocomposite thin film capacitor integrated with Solar cells for low power wireless communication systems”

    S. Jana, S. Das, U. Gangopadhyay, P. Ghosh, S.K. Lahiri
    7th all India people’s Technology Congress, Volume , Year 2009, Pages

38. Diamond like Nanocomposite film: promising material in Orthopedic Articulating Joint Replacements

S. Jana, R. Chakraborty, M. Das Sarkar, P. Ghosh, S. K. Lahiri and U. Gangopadhyay
National Symposium for Materials Research Scholar MR-08, Volume , Year 2008, Pages