NAME: Dr. AMIT BANERJEE,
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GOOGLE SCHOLAR:
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MICROSYSTEM DESIGN-INTEGRATION LAB FACILITIES:
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OBJECTIVE: Seeking a challenging future in Research & Development and Academics which allows the application of individual aptitude and innovative ideas, making it a process of continuous learning.

CORE RESEARCH EXPERINCE: 13 Years.
Microelectronic Technologies & Devices, Instrumentation Architecture.

CORE TEACHING EXPERINCE: 2.8 Year.
Core Expertise: Electricity and Magnetism, Digital Systems and Applications, Applied Optics

EMPLOYMENT:

1. **Assistant Professor (Staff Position, Govt. of West Bengal, India),**
Physics Department, Bidhan Chandra College (http://www.bccollegeasansol.ac.in)
Kazi Nazrul University, Asansol, West Bengal, India 713303,
from 1st Feb 2020- till date

2. Scientist (Staff Position, NUS Research Track, Lecturer Grade),
Microelectronic Technologies & Devices (https://www.ece.nus.edu.sg/home/mtd.html),
Department of Electrical and Computer Engineering,
National University of Singapore, **Singapore**,
QS World University Ranking 11 (2019, 2020, 2021, 2022),
from 30th Nov 2017- 29th Jan 2020.

3. **Scientific Researcher (Staff Position, Lecturer Grade),**
Advanced Device Research Division,
Innovative Photonics Evolution Research Center (https://www.iperc.net/),
Research Institute of Electronics (http://www.rie.shizuoka.ac.jp/?en),
Shizuoka University, National University Corporation, Hamamatsu, **Japan,**
from 12th May 2016- 17th Nov 2017.

4. Research Associate, Energy Research Unit,
Indian Association for the Cultivation of Science, (http://www.iacs.res.in/) Kolkata, India,
from Jan 2016 to May 2016.
Research Fellow, Energy Research Unit, Indian Association for the Cultivation of Science, Kolkata, India, from June 2009 to Jan 2016.

ACADEMIC QUALIFICATIONS:

- Ph.D. (Physics/Semiconductor Technology, Jadavpur University, Kolkata, India), 2016, from Energy Research Unit, Indian Association for the Cultivation of Science (I.A.C.S.), Kolkata, Premier R & D Institute under D.S.T., Govt. of India (IACS Ranked in Top-3 R & Ds in India by Nature 521, 2015, 142)
- M.Sc. (Physics), 2008, School of Physical Sciences, Jawaharlal Nehru University (J.N.U), New Delhi, Central University, under M.H.R.D., Govt. of India (Ranked in Top-1, National Institutional Ranking Framework, Govt. of India).

ACADEMIC ACHIEVEMENTS/AWARDS:

1. **Best Paper Award, with Cash Award GBP 200.00 and Free Membership of Society for Functional Nanomaterials,** in Industrial and Clinical Applications, International Symposium Functional Nanomaterials in Industrial and Clinical Applications, 2020, by University of Central Lancashire, UK https://secondnanosymposiumatuclan.net/awardees/
2. **Best Paper Award,** 16th International Conference of Quality in Research (QiR), 2019, Indonesia.
3. **Awarded Key Scientific Article Certificate. Publication (Appl. Surf. Sci., 273, 2013, 806) featured as a Key Scientific Article contributing to excellence in engineering, scientific and industrial research, by Advances in Engineering :** http://advanceseng.com/general-engineering/realizing-variety-carbon-nanostructures-low-temperature-using-mw-pecvd-ch4-h2-plasma/
4. **Awarded Honorary Life-Membership (No. LM/1081), Indian Physical Society, 2016**.
5. **Young Physicist Award** by the Indian Physical Society (IPS) at the 33th Young Physicist Colloquium, SINP, Kolkata, 2015.
6. **Best Paper Award** by the **Metrology Society of India (MSI)** at the 4th National Conference on Advances in Metrology (AdMet 2015), CSIR-CMERI, Durgapur, West Bengal, 2015.
7. **Best Paper Award** by the **Indian Institute of Chemical Engineers (IIChE)** at the 2nd International Conference on Nanotechnology (ICNT 2015) and Indo-USA joint Symposium on New Approaches to Energy Harvesting: Alternative to fossil fuel, HIT, Haldia, West Bengal, 2015.
8. Biography published by the international biographical society: Who's Who in America, in the 70th Platinum Anniversary Edition (Identity No. 36966765), Sept'2015.
9. **Best Paper Award** by **Dept. of Atomic Energy (D.A.E.), Govt. of India**, in the 58th DAE Solid State Physics Symposium, 2013.
10. **Awarded/Invited as visiting scientist, under the India-Taiwan Programme of Cooperation In Science & Technology**, at the Center for Condensed Matter Sciences (C.C.M.S.), National Taiwan University (N.T.U.), Taipei, Taiwan, during the period 1st March-1st May 2012, co-funded by the National Science Council (Govt. of Taiwan) and Department of Science and Technology (Govt. of India).

RESEARCH PROJECTS:

❖ Active Research Project Currently:

"Design and Development of Thermal Screening and Surveillance Device Prototype with On-chip Integrated Terahertz Detector Arrays", supported by **Competitive Research Grant under Technology Development Board, Device Development Programme** (DDP: https://dst.gov.in/device-development-programme-ddp)**, by the Department of Science & Technology (DST),** Ministry of Science and Technology, Government of India.

❖ Microsystem Design-Integration Lab Resources and Design Capabilities:

- **COMSOL Multiphysics with following packages:**
  - ✓ **Wave Optics Module,**
  - ✓ **Ray Optics Module,**
  - ✓ **RF Module,**
  - ✓ **AC/DC Module,**
  - ✓ **Semiconductors Module,**
  - ✓ **MEMS Module,**
  - ✓ **Heat Transfer Module,**
  - ✓ **Design Module,**
  - ✓ **Material Library Module**
- **NI Multisim Software,**
- **NI Ultiboard Software,**
- **NI LabVIEW Software and DAQs**
- **Siemens Solid Edge Software for 3D Design,**
- **Advanced Design and Computation Facility**

Lab Website:
www.banerjeemicrosystemlabs.com

❖ **Ongoing Research Collaboration Between:**

✓ **Charged Particle Optics Lab:** https://cde.nus.edu.sg/
Principal Investigator: Prof. Anjam Khursheed,
Electrical and Computer Engineering, National University of Singapore
4 Engineering Drive 3, Singapore 117583

✓ **Nanosystem Integration Laboratory:** https://www.rie.shizuoka.ac.jp/?en
Principal Investigator: Prof. Hiroshi Inokawa,
Advanced Device Research Division, Research Institute of Electronics, Shizuoka University,
3-5-1 Johoku, Naka-ku, Hamamatsu, 432-8011 Japan

✓ **TCGCREST- CQuERE:** https://www.tcgcrest.org/institutes/cquere/
Principal Investigator: Dr. Tanmoy Basu, Research Scientist,
Centre for Quantum Engineering, Research and Education,
TCG Centres for Research and Education in Science and Technology,
Sector V, Salt Lake, Kolkata 700091, INDIA.

✓ **Machine Learning Lab,** Principal Investigator: Dr. Debabrata Samanta, Department of Computer Science, CHRIST (Deemed to be University), Bengaluru - 560029, Karnataka, India

❖ **Research Projects Managed:**

✓ **Micro-fabricated electron sources (Graphene and CNT) for next generation electron lithography/scanning electron microscopy/XRay sources,** National Research Foundation funding, for Department of Electrical and Computer Engineering, National University of Singapore, **2017-2020**.

Industry Partners:

- **KLA-Tencor USA** (Semiconductor manufacturing);
- **Thermo Fisher Scientific USA** (Microscopy and biotechnology product);
- **Hitachi High Technologies Japan** (Microscopy and biomedical products);

✓ **On-chip integrable Terahertz Microbolometers for Biomedical Imaging,** Japan Science and Technology Agency (JST) under Industry-Academia Collaborative R&D Program, for Research Institute of Electronics, Shizuoka University, Japan; **from 2016-2017.**

Industry Partners:

- Innovative Photonics Evolution Research Center (http://www.iperc.net): Cooperative research facility with Research Institute of Electronics, **Hamamatsu Photonics K.K Japan (optical sensors, sources, biomedical devices**); Hamamatsu Medical University; Graduate School for the Creation of New Photonics Industries

✓ **"Study on biomedical terahertz imaging based on wide-bandgap-semiconductor IMPATT Source"**, 2019/2020 Cooperative Research at **Research Center of Biomedical Engineering, Tokyo Medical and Dental University, Japan [**Co-Principal Investigator with Research Institute of Electronics, Japan], **from 2019-2021**.

VISITING SCIENTIST:

➢ Visiting Scientist, under the India-Taiwan Programme of Cooperation in Science & Technology, at the Center for Condensed Matter Sciences (C.C.M.S.), National Taiwan University (N.T.U.), **Taipei,** Taiwan, 1st March-1st May 2012, co-funded by the National Science Council (Govt. of Taiwan) and Department of Science and Technology (Govt. of India).

➢ Visiting Scientist, Institute of Scientific Instruments of Czech Academy of Sciences, Brno, **Czech Republic** (ii) TESCAN, one of the world's leading manufacturers of Scanning Electron Microscopes and Focused Ion Beam-Scanning Electron Microscope, Brno, **Czech Republic,** from June 22-July 02, 2019, co-funded by National University of Singapore and TESCAN.

CURRENT RESEARCH:

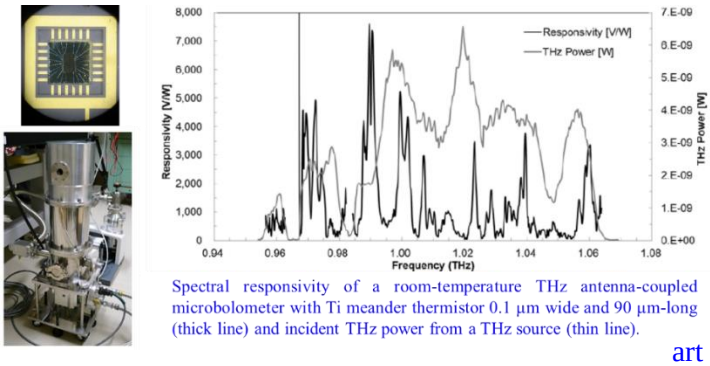
On-chip Integrable Uncooled Terahertz Microbolometer Arrays for Biomedical Applications

REF: J. Applied Physics, 125, (2019) 214502, https://doi.org/10.1063/1.5083643

REF: Nanomedicine, https://doi.org/10.2217/nnm-2020-0386

Collaborator: Prof. Hiroshi Inokawa, Director, Advanced Device Research Division, Research Institute of Electronics, Shizuoka University, Japan (http://www.rie.shizuoka.ac.jp/~nanosys/index_e.html) and Innovative Photonics Evolution Research Center (iPERC, http://www.iperc.net)

Uncooled antenna-coupled microbolometer arrays are fabricated for terahertz (THz) detection with nanoscale meander-shape Ti thermistors (with design width, DW=0.1 and 0.2 μm respectively) on SiO_2 and SiN_X substrate. Each unit device with thermistor DW= 0.1 μm, found to have double the value of electrical responsivity (787 V/W) than that of the unit devices with thermistor DW= 0.2 μm (386 V/W) at maximum allowable bias current (I_b= 50 for DW= 0.1 μm and 100 μA for DW= 0.2 μm, respectively). However, the calculated noise equivalent power (NEP) for unit devices with thermistor DW=0.1 μm, found: NEP=1.85 x 10^{-10} W/$\sqrt{Hz}$ at I_b=50 μA, and for unit devices with thermistor DW=0.2 μm, NEP=1.58 x 10^{-10} W/$\sqrt{Hz}$ at I_b=100 μA, respectively. The current work validates our previous investigations in quest of understanding the effect of **narrow-width effect** on device parameters like temperature coefficient of resistance (TCR) and resistivity (ρ), in efforts of device miniaturization. The reduced grain size in thinner metal interconnects (thermistors), could be linked to reduction of TCR and increased resistivity of the devices. For optical response with 1 THz Schottky-diode multiplier source with a microwave signal generator and an optical chopper in the THz measurements. Frequency of THz power emitted from the source is scanned from 0.955 to 1.065 THz by changing the microwave frequency. The highest responsivity is 7,600 V/W and the resultant NEP is 6.7×10^{-12} W/$Hz^{1/2}$ at 0.9896 THz. The peaks and valleys in the spectral response possibly comes from interference of THz wave in the Si-substrate and high-density polyethylene (HDPE) window. There are many high-responsivity bands with the orders of 1000 V/W in the spectrum.



Spectral responsivity of a room-temperature THz antenna-coupled microbolometer with Ti meander thermistor 0.1 μm wide and 90 μm-long (thick line) and incident THz power from a THz source (thin line).

Thanks to the high responsivity and low noise of the metal thermistor, we have achieved good noise-equivalent power (NEP) of the order of 10^{-11} W/$Hz^{1/2}$ and response speed of 5 kHz for the room-temperature antenna-coupled bolometers with Ti meander thermistor 0.1 μm-wide and 90 μm-long.

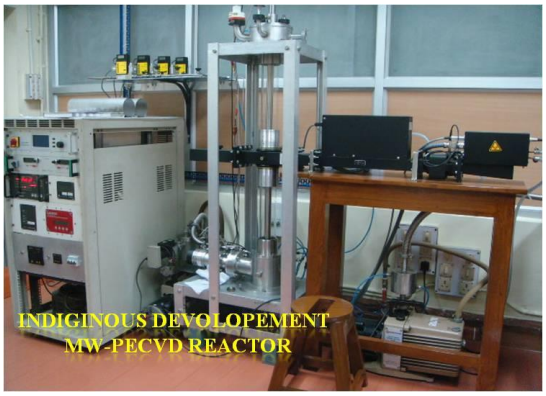
These antenna-coupled microbolometer arrays, are compatible with the state-of-the-art medium-scale semiconductor device fabrication processes, and technologically competitive with commercial viability as on-chip integrable detector arrays for terahertz imaging.

Ph.D Thesis Work:

Project Title	Under the Supervision of
THESIS TITLE: *Low Temperature Synthesis of Silicon and Carbon Nano-structured Thin Films and their Optimization for Optoelectronic Applications (Experimental)*	**Prof. D.Das, Group Home Page: http://www.iacs.res.in/faculty-profile.html?id=89** **Head, Energy Research Unit, &** **Chairperson Centre for Advanced Materials,** **Indian Association for the Cultivation of Science** Jadavpur, Kolkata-32
BRIEF DESCRIPTION: Designing, devolvement and zone optimization of high vacuum Microwave Plasma Enhanced Chemical Vapor deposition unit (MW-PECVD), inductively coupled RF PECVD (ICP-RFPECVD), RF-Magnetron Sputtering, Thermal CVD. Synthesis of Nano-Diamond/Diamond like Carbon (DLC)/Graphene/ Crystalline Silicon and its various characterizations. Study and Developments of the materials for applications in optoelectronic devices (solar cell/ field emission).	

INDIGENOUS INSTRUMENT & PROCESS DEVELOPMENT:

- Indigenous Devolvement of high vacuum Microwave Plasma Enhanced Chemical Vapor deposition unit (MW-PECVD) at the ERU/IACS.
- Conceived the process for cost effective commercial grade antireflection coatings (ARC) synthesis for solar cells by nanocrytalline diamonds at the ERU/IACS.



SOPHISTICATED INSTRUMENTS HANDLED:

a) **For Deposition Purpose:**
   i. Micro-Wave Plasma Enhanced CVD (MW-PECVD) unit: For Nanodiamond Synthesis
   ii. Magnetron RF-Sputtering Unit: For Diamond Like Carbon (DLC) Synthesis
   iii. Inductively Coupled Plasma Enhanced CVD (ICP-PECVD) unit: For Nanocrystalline Silicon Synthesis
   iv. Thermal CVD unit: For Graphene Synthesis/Dry and Wet Oxidization.
   v. RF-ECR Plasma CVD: For SiNx/SiO_2 Synthesis

b) **Class 1000/100/10 Clean Room Fabrication Facility Worked With:**
   - ECE, NUS E6NanoFab, Singapore: http://e6nanofab.nus.edu.sg/
   - NUS Centre for Advanced 2D Materials, Singapore: https://graphene.nus.edu.sg/
   - IPERC, JAPAN: http://www.iperc.net/equipment/
   - RIE, JAPAN: http://www.rie.shizuoka.ac.jp/pdf/clean.pdf
   - SHIZUOKA UNIV, JAPAN: http://kyodoriyo05.eng.shizuoka.ac.jp/HP/instrument.html
   - IACS, INDIA : http://iacs.res.in/faculty-profile.html?id=89#

- E-Beam Lithography (JEOL JBX6300 SP)
- ECR plasma deposition (Si oxidation and nitride coating)
- Electric furnace (Si oxidation and doping of a substrate)
- Reflectance spectroscopy film thickness meter (Otsuka Electronics FE3000)
- Ellipsometry (transverse groove DHAOLXS)
- Optical microscope (OLYMPUS MX51 and DSX500)
- Draft (YAMATO CVY180)
- Spin coater (SUSS MicroTec DELTA80T)
- Aligner (SUSS MicroTec MJB4)
- Low temperature prober with 4156C precision semiconductor parameter analyser by Agilent
- Metal deposition apparatus (ULVAC)

c) **For Characterization Purpose:**

- Field Emission Scanning Electron Microscope (FESEM), JEOL JSM-7001F/7600F
- Electron Backscatter Diffraction (EBSD), JSM-7001F / JEOL & Bruker
- EDS (JSM–6360LA /JED–2300)
- High Vacuum Electron Gun Metal Evaporator
- Micro-Raman, Horiba Jobin Yvon/NRS–7100
- Hall Measurement Unit, ECOPIA: HMS 3000
- Solar simulator and Quantum-Efficiency
- UV-Spectrophotometer
- Surface Profilometer/ film thickness meter, Otsuka Electronics FE3000
- Atomic Force Microscope (AFM), Bruker
- Ellipsometer, Horiba Jobin Yvon
- X-ray diffractometer (XRD), Bruker
- Transmission Electron Microscope (TEM), JEOL
- Fourier transform infrared spectroscopy (FTIR)
- X-Ray Photoelectron Spectroscopy (XPS)
- LCR meter
- Low Temperature Probe Station for nanodevices
- I-V measurement setup with low temperature facilities
- Squid Magnetometer (MPMS)
- Laboratory Centrifuge
- Spin coater, SUSS MicroTec DELTA80T
- Four point probe resistance measuring instrument, RIKEN K705RS
- Thin film X–ray diffraction (Rigaku)
- ESCA (Shimadzu ESCA–3400)
- STEM (JEOL, JEM–2100F)
- Raman (JASCO NRS–7100)
- FTIR (JASCO, FT / IR–6300, IRT–7000)

BOOK PUBLICATIONS & EDITORIAL ENGAGEMENT:

1. **Lead and Corresponding Editor,** Book Titled "**Terahertz Biomedical and Healthcare Technologies"**, Publisher: **Elsevier Inc. Cambridge, USA,** 2020, ISBN 9780128185568, https://www.elsevier.com/books/terahertz-biomedical-and-healthcare-technologies/banerjee/978-0-12-818556-8
2. **Corresponding Editor,** Book Titled "**Emerging Trends in Terahertz Solid-State Physics and Devices**", Publisher: **Springer Nature Singapore,** 2020, https://www.springer.com/gp/book/9789811532344
3. **Editor,** Book Titled "**Internet of Things for Healthcare Technologies**", Publisher: **Springer Nature Singapore,** 2020, https://www.springer.com/gp/book/9789811541117
4. **Editor,** "**Advances in Computer, Communication and Control**", Publisher: **Springer Nature Singapore,** https://www.springer.com/us/book/9789811331213
5. **Corresponding Editor,** Book Titled "**Internet of Medical Things for Smart Healthcare**", Publisher: **Springer Nature Singapore,** Singapore, 2021, https://www.springer.com/gp/book/9789811580963
6. **Corresponding Editor,** Book Titled "**Emerging Trends in Terahertz Engineering and System Technologies**", Publisher: **Springer Nature Singapore,** 2021, https://www.springer.com/gp/book/9789811597657
7. **Corresponding Author, Authored Book** Titled "**Computationally Intensive Statistics for Intelligent IoT**", Publisher: **Springer Nature Singapore,** 2021, https://link.springer.com/book/10.1007/978-981-16-5936-2
8. **Corresponding Editor,** Book Titled **"Artificial Intelligence and the Fourth Industrial Revolution**", Taylar-Francis Publishing, Singapore, 2022, https://www.taylorfrancis.com/books/edit/10.1201/9781003159742/artificial-intelligence-fourth-industrial-revolution-utpal-chakraborty-amit-banerjee-jayanta-kumar-saha-niloy-sarkar-chinmay-chakraborty
9. **Corresponding Editor,** Book Titled "**Carbon Quantum Dots for Sustainable Energy and Optoelectronics"**, Publisher: **Elsevier Inc. Cambridge, USA,** 2023, https://www.elsevier.com/books/carbon-quantum-dots-for-sustainable-energy-and-optoelectronics/batabyal/978-0-323-90895-5
10. **Editor,** Special issue on Network Optimization Problem Through Evolutionary Algorithm, International **Journal of Computer Networks & Communications** (IJCNC): http://airccse.org/journal/sicfp1-19.html
11. **Editor,** Special issue on Special Issue on Innovation in Information Technology Through Smart Cloud and Analytics, International Journal of Grid and High Performance Computing (IJGHPC, IGI Global), Volume 12, Issue 3: https://www.igi-global.com/journal/international-journal-grid-high-performance/1105
12. **Editor,** Special issue on Recent Development in Smart Material for Engineering Application, Current Materials Science: https://benthamscience.com/journals/current-materials-science/special-issues/

PEER REVIEWED INTERNATIONAL PUBLICATIONS:

1. Realizing a variety of carbon nanostructures at low temperature using MW-PECVD of (CH_4 + H_2) plasma, Amit Banerjee and Debajyoti Das, **Applied Surface Science**, 273, 2013, 806–815.
2. Low temperature synthesis of spherical Nano-Diamond, Amit Banerjee and Debajyoti Das, **Journal of Experimental Nanoscience**, 9, 2014, 818–824.
3. Fabrication of Highly Transparent Diamond-like Carbon Anti-Reflecting Coating for Si Solar Cell Application, Amit Banerjee and Debajyoti Das, American Institute of Physics Conf. Proc. 1591, 2014, 856–857.
4. Spectroscopic studies on nanocrystalline silicon thin films prepared from H_2-diluted SiH_4-plasma in inductively coupled low pressure RF PECVD, Mahua Chakraborty, Amit Banerjee and Debajyoti Das, **Physica E**, 61, 2014, 95–100.
5. Self-assembled ultra-nanocrystalline silicon films with preferred <220> crystallographic orientation for solar cell applications, Amit Banerjee and Debajyoti Das, **Applied Surface Science**, 330, 2015, 134–141.
6. Anti-reflection coatings for silicon solar cells from hydrogenated diamond like carbon, Debajyoti Das and Amit Banerjee, **Applied Surface Science**, 345, 2015, 204–215.
7. Further improvements of nano-diamond structures on unheated substrates by optimization of parameters with secondary plasma in MW-PECVD, Debajyoti Das and Amit Banerjee, **Surface and Coating Technology**, 272, 2015, 357–365.
8. Synthesis of Thin Film Nano-Diamonds on Unheated Substrates by Secondary Plasma in MW-PECVD, Amit Banerjee and Debajyoti Das, American Institute of Physics Conf. Proc., 1665, 2015, 050077.
9. Self-assembled nc-Si:H Thin Films by Low-pressure Planar Inductively Coupled Plasma CVD for Applications in nc-Si Solar Cells, Debajyoti Das and Amit Banerjee , American Institute of Physics Conf. Proc., 1665, 2015, 050052.
10. Anti-friction Diamond-like Carbon Nanocoatings For Advanced Tribological Applications, Santosh Singh, Amit Banerjee, Debajyoti Das, Rashmi Ranjan Sahoo, American Institute of Physics Conf. Proc., 1832, 2017, 080036.
11. Development of Commercially Viable Diamond Like Carbon Anti-Reflection Coatings for Silicon Solar Cells, Amit Banerjee and Debajyoti Das, Accepted, Physics Teacher Journal (Indian Physical Society), 2017.
12. Width dependence of platinum and titanium thermistor characteristics for application in room-temperature antenna-coupled terahertz microbolometer, Amit Banerjee, Hiroaki Satoh, Ajay Tiwari, Catur Apriono, Eko Tjipto Rahardjo, Norihisa Hiromoto and Hiroshi Inokawa, **Japan. J. Appl. Phys., 56, 2017, 04CC07**.
13. Strong quantum confinement effects in nanometer devices with graphene directly grown on insulator by catalyst-free chemical vapor deposition, Hiroto Sato, Atsushi Nakamura, Amit Banerjee, Kenji Yamada, Hiroaki Satoh, Jiro Temmyo and Hiroshi Inokawa, **Current Graphene Science, 1, 2017, 44-48**.
14. Effect of Mn^{2+} Doping on Optical and Electrical Properties of Lanthanum Ferrite Nanoperticles, Shovan Kumar Kundu, Dhiraj Kumar Rana, Ayan Mukherjee, Amit Banerjee, Debajyoti Das and Soumen Basu, Accepted, Materials Today Proceedings, 2017.
15. Enhancement of Multiferroic Properties and unusual Magnetic Phase Transition in Eu doped Bismuth Ferrite Nanoparticles, Mahasweta Banerjee, Ayan Mukherjee, Amit Banerjee, Debojyoti Das, Soumen Basu, **New Journal of Chemistry (RSC), 41, 2017, 10985**.
16. Room-Temperature Terahertz Microbolometer Arrays for Biomedical Imaging Applications, Amit Banerjee, Hiroaki Satoh, Yash Sharma, Norihisa Hiromoto, Hiroshi Inokawa, Journal of

Nanomedicine & Nanotechnology, 8:6 (Suppl), 2017, 15, DOI: 10.4172/2157-7439-C1-054, https://www.omicsonline.org/conference-proceedings/2157-7439-C1-054-004.pdf **.**

17. Novel synthesis of Cu2O-graphene nano platelets through two step electrodeposition method for selective detection of hydrogen peroxide, J. Sharath Kumar, Naresh C Murmu, Pranab Samanta, Amit Banerjee, R S Ganesh Hiroshi Inokawa, T. Kuila, **New Journal of Chemistry (RSC), 42, 2018, 3574-3581**.
18. Structural, Magnetic and Optical properties of Lanthanum Ferrite Nanoparticles with Application Perspective, Shovan Kumar Kundu, Dhiraj Kumar Rana, Ayan Mukherjee, Amit Banerjee, Debajyoti Das and Soumen Basu, **Advanced Science Letters, 24, 2018, 913–917**.
19. Optimization of Narrow Width Effect on Titanium Thermistor in Uncooled Antenna-Coupled Terahertz Microbolometer, Amit Banerjee, Hiroaki Satoh, Durgadevi Elamaran, Yash Sharma, Norihisa Hiromoto and Hiroshi Inokawa, **Japanese Journal of Applied Physics 57 (4S), 2018, 04FC09**.
20. Modified electrochemical charge storage properties of h-BN/rGO superlattice through the transition from n to p type semiconductor by fluorine doping, Sanjit Saha, Pranab Samanta, Naresh C Murmu, Amit Banerjee, R Shankar Ganesh, Hiroshi Inokawa, T. Kuila, **Chemical Engineering Journal, 339, 2018, 334-345**.
21. Characterization of Platinum and Titanium Thermistors for Terahertz Antenna-Coupled Bolometer Applications, Amit Banerjee, Hiroaki Satoh, Yash Sharma, Norihisa Hiromoto and Hiroshi Inokawa, communicated, **Sensors and Actuators A: Physical, 273, 2018, 49–57**.
22. 1.0 THz GaN IMPATT Source: Effect of Parasitic Series Resistance, Arindam Biswas, Sayantan Sinha, Aritra Acharyya, Amit Banerjee, Srikanta Pal, Hiroaki Satoh, Hiroshi Inokawa, **Journal of Infrared, Millimeter, and Terahertz Waves, 39 (10), 2018, 954–974.**
23. Noise Performance of Magnetic Field Tunable Avalanche Transit Time Source, Partha Banerjee, Aritra Acharyya, Arindam Biswas, A.K. Bhattacharjee, Amit Banerjee, Hiroshi Inokawa, **International Journal of Electronics and Communication Engineering, 12, 10, 2018, 718-728.**
24. Nano-diamond and Diamond-like Carbon Thin Films for Anti-Reflecting Coating Application on Silicon Solar Cells, Amit Banerjee and Debajyoti Das, Materials Today: Proceedings, 5 (2018) 23316–23320.
25. A SILAR method for the fabrication of layer-by-layer assembled Cu_2O-reduced graphene oxide composite for non-enzymatic detection of hydrogen peroxide, J. S Kumar, Naresh C Murmu, Amit Banerjee, R S Ganesh, Hiroshi Inokawa, T. Kuila, **Materials Research Express, 6, 2019, 025045**
26. Antenna-Coupled Terahertz Microbolometers with Meander Structures: the Comparison of Titanium and Platinum Thermistors, N. Hiromoto ; E. Durgadevi ; A. Baneriee ; H. Satoh ; H. Inokawa ; C. Apriono ; E. T. Rahardjo, D. Itoh, E. Bruendermann, IEEE Xplore, 18227494, IEEE-IRMMW-THz 2018, DOI: https://doi.org/10.1109/IRMMW-THz.2018.8509929.
27. Performance Improvement of On-chip Integratable Terahertz Microbolometer Arrays with Nanoscale Meander Titanium Thermistor, Amit Banerjee, Hiroaki Satoh, Durgadevi Elamaran, Yash Sharma, Norihisa Hiromoto and Hiroshi Inokawa, **Journal of Applied Physics, 125, (2019) 214502.**
28. Synthesis of Tri-functional Core-shell CuO@carbon Quantum Dots@carbon Hollow Nanospheres Heterostructure for Non-enzymatic H2O2 Sensing and Overall Water Splitting Applications, J Sharath Kumar, Saikat Bolar, Naresh C Murmu, R S Ganesh, Hiroshi Inokawa, Amit Banerjee, Tapas Kuila, E**lectroanalysis,** 31, 2019 1-11.
29. Influence of manganese on multiferroic and electrical properties of lanthanum ferrite nanoparticles. SK Kundu, DK Rana, Amit Banerjee, D Das, S Basu. **Materials Research Express 6 (8), 2019, 085032.**
30. Beyond conventional secondary electron imaging using spectromicroscopy and its applications in dopant profiling, Weiding Han , Avinash Srinivasan , Amit Banerjee , Matthew Chew, Anjam Khursheed, **Materials Today Advances (Elsevier's Materials Today family), 2, 2019, 100012**.

31. Impact of Downscaling on Terahertz Antenna-Coupled Bolometers, Hiroshi Inokawa, Amit Banerjee, Durgadevi Elamaran, Hiroaki Satoh, Norihisa Hiromoto, IEEE Xplore, 2019, DOI: https://doi.org/10.1109/QIR.2019.8898297
32. Room-Temperature Terahertz Antenna-Coupled Microbolometers with Titanium Thermistor and Heater, Norihisa Hiromoto, Amit Banerjee, Durgadevi Elamaran, Makoto Aoki, Catur Apriono, Hiroaki Satoh, Erik Bruendermann, Eko Tjipto Rahardjo, Hiroshi Inokawa, IEEE Xplore, 2019, DOI: https://doi.org/10.1109/QIR.2019.8898200
33. High Responsivity and Low NEP of Room-Temperature Terahertz Antenna-Coupled Microbolometers with Meander Titanium Thermistor, Norihisa Hiromoto, Amit Banerjee, Durgadevi Elamaran, Makoto Aoki, Catur Apriono, Hiroaki Satoh, Erik Bruendermann, Eko Tjipto Rahardjo, Hiroshi Inokawa, IEEE Xplore, 2019, DOI: https://doi.org/10.1109/IRMMW-THz.2019.8874346
34. Emerging Trends in IoT and Big Data Analytics for Biomedical and Healthcare Technologies, Amit Banerjee*, Chinmay Chakraborty, Anand Kumar, Debabrata Biswas, **Handbook of Data Science Approaches for Biomedical Engineering, 2020, 121-152, Elsevier Publication, ISBN 978-0-12-818318-2** (*Corresponding Author)
35. Prospects in Medical Applications of Terahertz Waves, Amit Banerjee*, Saumitra Vajandar, Tanmoy Basu, **Terahertz Biomedical and Healthcare Technologies**, **Elsevier**, 225-239, 2020, **ISBN** 9780128185568. (*Corresponding Author)
36. Medical Imaging, Artificial Intelligence, Internet of Things, Wearable Devices in Terahertz Healthcare Technologies, Amit Banerjee*, Chinmay Chakraborty, Megha Rathi, **Terahertz Biomedical and Healthcare Technologies**, **Elsevier**, 145-165, 2020, **ISBN** 9780128185568. (*Corresponding Author)
37. 2D Materials as THz generators, detectors, and modulators: Potential candidates for biomedical applications, Tanmoy Basu, Amit Banerjee*, Saumitra Vajandar, **Terahertz Biomedical and Healthcare Technologies**, **Elsevier**, 75-87, 2020, **ISBN** 9780128185568. (*Corresponding Author)
38. Performance Comparison of SOI-Based Temperature Sensors for Room-Temperature Terahertz Antenna-Coupled Bolometers: MOSFET, PN Junction Diode and Resistor, D Elamaran, Y Suzuki, H Satoh, A Banerjee, N Hiromoto, H Inokawa, **Micromachines** 11 (8), 2020, 718
39. Quantitative material analysis using secondary electron energy spectromicroscopy, W. Han, M. Zheng, A. Banerjee, Y. Z. Luo, L. Shen, A. Khursheed, **Scientific Reports (Nature Group),** 10, 2020, 22144.
40. Data Analysis and Interpretation in IoT-Based Systems for Critical Medical Services and Healthcare Applications, Aanshi Rustagi, Mansi Shukla, FCD Samuel, S. Ananda Kumar, Amit Banerjee, Sangeetha Ramaswamy, L Ramanathan, **Wireless Personal Communications**, 118, 933-948 (2021).
41. Terahertz Radiation from Gallium Phosphide Avalanche Transit Time Sources, Aritra Acharyya, Arindam Biswas, Bisal Sarkar, Amit Banerjee, Hiroshi Inokawa, Emerging Trends in Terahertz Engineering and System Technologies, **Springer Nature, ISBN** 978-981-15-9765-7, 2021.
42. Design and Development of Terahertz Medical Screening Devices, M.P.Karthikeyan, Debabrata Samanta, Amit Banerjee*, Arjya Roy, Hiroshi Inokawa, Trends in Wireless Communication and Information Security, Lecture Notes in Electrical Engineering, **Springer Nature, ISSN** 1876-1100, 2021. (*Corresponding Author)
43. Nanometer-scale Photodetectors for High Performance and Unique Functionality, H. Inokawa, H. Satoh, A. Banerjee, A Nagarajan, R Manivannan, A Singh, T. Nishimura, K Isogai, Trends in Wireless Communication and Information Security, Lecture Notes in Electrical Engineering, **Springer Nature, ISSN** 1876-1100, 2021.
44. Millimeter Wave: A Novel Approach for Integrating Radar and Communication for Autonomous Driving, M. Chakraboty, A. Banerjee, D Kandar, B Maji, Trends in Wireless Communication and Information Security, Lecture Notes in Electrical Engineering, **Springer Nature, ISSN** 1876-1100, 2021.

45. Tunable graphene nanopatch antenna design for on-chip integrated terahertz detector arrays with potential application in cancer imaging, Debabrata Samanta , MP Karthikeyan, Amit Banerjee, Hiroshi Inokawa, **Nanomedicine**, 2021, DOI https://doi.org/10.2217/nnm-2020-0386 (*Corresponding Author)
46. A Deep Learning Model For Information Loss Prevention From Multi-page Digital Documents A Guha, D Samanta, A Banerjee, D Agarwal, **IEEE Access,** 2021, 10.1109/ACCESS.2021.3084841
47. Cipher Block Chaining Support Vector Machine for Secured Decentralized Cloud Enabled Intelligent IoT Architecture, D Samanta, AH Alahmadi, K M P, MZ Khan, A Banerjee, GK Dalapati, Seeram Ramakrishna, **IEEE Access,** 2021, 10.1109/ACCESS.2021.3095297
48. LIMAP: A Lightweight Multilayer Authentication Protocol for WBAN, P Das, A Vashisth, D Chadha, SA Kumar, A Banerjee, S Shiaeles, **Wireless Personal Communications,** 121, pages2857–2884 (2021).
49. Trends in Terahertz Biomedical Applications, Debabrata Samanta, M. P. Karthikeyan, Daksh Agarwal, Arindam Biswas, Aritra Acharyya, Amit Banerjee, **Generation, Detection and Processing of Terahertz Signals,** 285-299, Springer Nature, 2021. (*Corresponding Author)
50. Multi Response Optimization of Turning Parameters for Cryogenically Treated and Tempered WC-Co Inserts, K Balamurugan, D T, AK Subramanian, A Banerjee, A Biswas, A Sinha, **J. Inst. Eng. India Ser. D** https://doi.org/10.1007/s40033-021-00321-x, 2022.
51. Metaheuristic Load-Balancing Based Clustering Technique in Wireless Sensor Networks, Sandip K Chaurasiya, Arindam Biswas, Prasit Kumar Bandyopadhyay, Amit Banerjee, Rajib Banerjee, Volume 2022 |Article ID 8911651, **Wireless Communications and Mobile Computing,** 2022. (*Corresponding Author)
52. IoT based Response time analysis of messages for smart autonomous collision avoidance system using Controller Area Network, Anil Kumar Biswal, Debabrata Singh, Binod Kumar Pattanayak, Debabrata Samanta, Amit Banerjee, Seteikin A.Y, Samusev I.G., Volume 2022, Article ID 1149842, **Wireless Communications and Mobile Computing**, 2022 (*Corresponding Author)
53. A Study on the Mechanical Properties of Rare Earth based Aluminium Composite, B K, D T, A K Subramanian, A Banerjee, D Agarwal, A Biswas, **J. Inst. Eng. India Ser. D**, 2022 (Accepted, *Corresponding Author).
54. A Mini Review on Future Perspectives of Carbon Quantum Dots, A Banerjee, SK Batabyal, B Pradhan, K Mohanta, RR Bhattacharjee, **Carbon Quantum Dots for Sustainable Energy and Optoelectronics", Publisher: Elsevier Inc. Cambridge, USA, In Production, 2022** (Accepted, *Corresponding Author).
55. Nanodiamonds for Advanced Photonic and Biomedical Applications, D Agarwal, N Dole, A Banerjee, A Banerjee, **Carbon Quantum Dots for Sustainable Energy and Optoelectronics**", **Publisher: Elsevier Inc. Cambridge, USA, In Production, 2022** (Accepted, *Corresponding Author).
56. Sulfide and selenide-based flexible and semi-transparent solar cells for building integrated photovoltaics, A Banerjee, A Sarkar, S Shukla, S Saxena, A Banerjee, A Gucchait, ...,**Sulfide and Selenide based Materials for Emerging Applications: Sustainable Energy harvesting and Storage Technology, 2022, ISBN: 9780323998604, Publisher: Elsevier Inc. Cambridge, USA,** (*Corresponding Author).
57. A Study on the Mechanical Properties of Rare Earth based Aluminium Composite, Balamurugan. K, Deepthi T, Ananda K Subramanian, Amit Banerjee, Daksh Agarwal, Arindam Biswas, Journal of **The Institution of Engineers (India): Series D**, Accepted, 2022 (*Corresponding Author).
58. Diagnose diabetic mellitus illness based on IoT smart architecture, Abhilash Pati, Manoranjan Parhi, Binod Kumar Pattanayak, Debabrata Singh, Debabrata Samanta, Amit Banerjee, Sajal Biring, Goutam Kumar Dalapati, **Wireless Communications and Mobile Computing,** Article ID 7268571 2022, (*Corresponding Author).

59. Review on the Evolution of 6G and Terahertz Communication for Highspeed Information Processing, **Bulletin of the Russian Academy of Sciences: Physics**, P. Sarkar, A. Saha, A. Banerjee, A. Banerjee, A. Y. Seteikin, I. G. Samusev, 86(1), pp. S166–S170, 2022, (*Corresponding Author).

Patent /Technology transfer /Product /Process:

1. Title: Open interactive Dynamic Online & Offline blended learning management system, Tapan Das , Amit Banerjee, Diary Number 1243/2021-CO/L, Approved, 2021.

ORAL AND INVITED PRESENTATIONS:

1. Further optimization of Superior Quality Hydrogenated Diamond-like Carbon Anti-Reflection Coating for Silicon Solar Cell Application, on the 4th National Conference on Advances in Metrology (AdMet 2015), CSIR-CMERI, Durgapur, West Bengal, 2015.
2. **Invited Speaker,** Development of Commercially Viable Diamond Like Carbon Anti-Reflection Coatings for Silicon Solar Cells, on the 33th Young Physicist Colloquium (YPC, by Indian Physical Society), SINP, 2015.
3. **Invited Speaker,** Low Temperature Synthesis of Carbon Nano-structured Thin Films for Advanced Energy Applications, on the National Conference on Carbon Materials for Energy Applications, CSIR-NPL, New Delhi, 2015.
4. Nano-diamond and Diamond-like Carbon Thin Films for Anti-Reflecting Coating Application on Silicon Solar Cells, presented at the 5th International Conference on Advances in Energy Research (ICAER-2015), IIT Bombay, 2015.
5. **Invited Speaker,** Low Temperature Synthesis of Silicon and Carbon Nano-structured Thin Films and their Optimization for Optoelectronic Applications, 346th Monday Morning Forum, Research Institute of Electronics, Hamamatsu, Japan, October 24, 2016.
6. **Key Note Speaker**, in the International Conference on Emerging Trends in Computing, Communication and Control [ICETC-2017, http://nfet.nshm.com/icetc3/index.php], held at NSHM Knowledge Campus, West Bengal, India, March 15-16, 2017.
7. Optimization of Platinum and Titanium Thermistor in Uncooled Antenna-Coupled Terahertz Microbolometer Fabrication, 4th International Conference on Nanoscience and Nanotechnology, August 9-11, 2017, SRM University, Chennai, India.
8. **Invited Speaker,** NSHM-Shizuoka University academic discussion, NSHM Knowledge Campus, Kolkata, India, 12th August 2017.
9. **Invited Speaker,** SAKURA Exchange Program in Science (Japan-Asia Youth Exchange Program in Science), Shizuoka University, Hamamatsu, Japan, September 13, 2017.
10. **Key Note Speaker**, 15th World Medical Nanotechnology Congress, Nanoelectronics and Biomedical Devices [https://medicalnanotechnology.conferenceseries.com/], October 18-19, 2017 Osaka, Japan.
11. **Invited Speaker**, Indian Chemical Engineering Congress [CHEMCON- 2017, http://chemcon2017.com/] and Indo-USA joint Symposium, to be held at HIT, West Bengal, India, December 27-30, 2017, organized by Indian Institute of Chemical Engineers (IIChE).
12. **Invited Speaker,** University academic discussion, Amity University Kolkata, Kolkata, India, 28th Dec 2017.
13. **Invited Speaker,** 2018 Global Workshop on Functional Materials and Devices, Jan 10-13, 2018, Nanyang Executive Center, Nanyang Technological University (NTU), Singapore [http://soiree-forum.org/gwfmd2018].
14. **Plenary Speaker**, in the International conference on Emerging Trend in Engineering and Science (ETES-2018), organized by/to be held at Asansol Engineering College, Asansol, West Bengal, India, 23-24th March, 2018 [http://www.aecetes.org/international.html].
15. **Plenary Speaker**, in the International Conference on Contemporary Advances in Innovative & Applicable Information Technology [ICCAIAIT, keical.edu.in], organized with technical sponsorship of Computer Society of India (CSI) and to be held at Kingston Educational Institute (KEI), Barasat, West Bengal, India, 24-25th March, 2018.
16. **Plenary Speaker**, Recent Advances in Informatics, Communication, Management, Health & Applied Sciences (RAICMHAS-2019), https://www.brainwareuniversity.ac.in/raicmhas-2019/**,** Brainware University, Kolkata, 2nd-3rd Feb, 2019.
17. **Plenary Speaker**, International Conference on Advanced Engineering, Science, Management and Technology – 2019" (ICAESMT19) being organized by Uttaranchal Institute of Technology, Uttaranchal University, Dehradun (RAICMHAS-2019), http://icaesmt19.uttaranchaluniversity.ac.in, March 14-15, 2019.

18. **Invited Speaker,** DeepTech Summit '19, http://wics-ai-deeptech.in/, scope convention centre, New Delhi, Nov 6-8, 2019.
19. **Star Speaker and Guest Panelist for CIO Track: Preparing for the Next Technology Wave, INFOCOM, ABP group's/WEBEL's flagship business, technology and leadership event**: https://www.indiainfocom.com/index/star_speakers
    with Rajat Ganguly, Director and Head – East, Dell Technologies India,
    Doman Yadav, Senior General Manager (Telecom), Powergrid Corporation of India,
    Supratik Banerjee, Vice President, TCG Digital Solutions Pvt Ltd,
    Rohonesh Kar, Presales Leader – India Media, Akamai Technologies,
    Arijit Ghosh, Enterprise Architect, Hewlett Packard Enterprise,
    and Mr. K K Mahapatra, Director - INFOCOM, ABP Pvt Ltd
    Recording of the session, at the following URL
    https://youtu.be/1cKWl7xh2Uk
    https://www.facebook.com/infocomconnect/videos/2612699465444992/
20. **Oral Talk,** 2nd European Conference on Smart Nanomaterials (SNAIA2019), https://snaia2019.com, École Nationale Supérieure de Chimie de Paris, ParisTech, Paris, France, from 10th to 13th of December 2019.
21. **Plenary Speaker,** IEEE International Conference on VLSI Device, Circuit and System (VLSI DCS-2020), http://sites.ieee.org/sb-msitceds/vlsi-dcs-2020/**,** Kolkata, March 21st-22nd, 2020.
22. **Keynote Speaker,** International Conference on Recent Trends in Engineering and Technology [RTET-2020], http://eve.siplhub.com/**,** April 24th – 25th, 2020 at Mallabhum Institute of Technology, Bishnupur, Bankura, W.B., India.
23. **Invited Speaker,** CIG Quantum break seminar W3-2, April 28th, 2020 at Centre for Quantum Technologies, National University Singapore, http://coldiongroup.wixsite.com/index
24. **Keynote Speaker,** Faculty Development Program on "Current Trends in Physical Sciences" (FDP CTPS-2020)jointly organized by AKTU, Lucknow and IAPT Kanpur in association with Christ church college Kanpur, PSIT Kanpur, FGIET, RaeBareli during 22-28 July 2020.
25. **Guest Panelist:** 5G connected healthcare, Amity University Jharkhand, 31st July 2020.
26. **Plenary Speaker and Session Chair,** International Conference on Emerging Wireless Communication Technologies and Information Security [EWCIS 2020], https://www.ewcis.in/keynotes.php**,** Oct 8th-9th, 2020 at Amity University, Ranchi, India.
27. **Keynote Speaker,** World Leaders Summit, event with more than 95 countries' global leaders, https://worldleadersummit.com/present-speaker/# **,** 07 to 16 Dec, 2020.
28. **Guest Panelist:** Supply Chain Management Conclave on Challenges in Healthcare Supply Chain, January 15, 2021, FORE School of Management, New Delhi **https://www.fsm.ac.in/coe/coscm/health-lecture**
29. **Keynote Speaker,** 1st International Conference on Computational Intelligence & Computing (ICCIC-2020ne), February 19-20, 2021, SR Group of Institutions, Jhansi & Institution of Electronics & Electrical Engineers, Kolkata Centre, http://iccic2020.in/
30. **Keynote Speaker and Session Chair,** Green Technologies for Sustainable Development-2021 (ICON GTSD-2021), March 9-11, 2021, Dharmsinh Desai University, Gujarat, India
31. **Keynote Speaker**, International Conference on Sustainable Development in Technology for 4th Industrial Revolution, March 12-13, 2021, Port City International University.
32. **Guest Panelist and Speaker Moderator:** "Navigating Industry 4.0 revolution with cutting edge technologies", 20th June 2021, The Piktale Influencer's Summit, https://www.piktale.com/summit, https://www.youtube.com/watch?v=ye1ezRtuPJ8
33. **Keynote Speaker and Session Chair,** Emerging trends in Wireless Communication, Biomedical Engineering with Information Security, 9th-10th September 2021, Amity School of Engineering and Technology, Amity University Jharkhand, Ranchi, India [EWCIS2021].
34. **Guest Speaker,** Faculty Development Programme on "Semiconductor Device, Microwave & Renewable Energy (SDMRE –2021)" on 22nd September, 2021, Asansol Engineering College.
35. **Keynote Speaker,** IEEE Workshop on Nanotechnology for Microeletronics, VLSI, and Sensors, 25th September 2021, IEEE Kharagpur Section, School of Medical Science and Technology (SMST), IIT Kharagpur

CONFERENCE AND SYMPOSIUM PUBLICATIONS:

1. Low Temperature Synthesis of Spherical Nano-Diamond, Amit Banerjee and Debajyoti Das, Proceedings of the 2nd International Conference on Advanced Nanomaterials and Nanotechnology (ICANN-2011), IIT Guwahati, Assam, 2011, 135.

2. Fabrication of Highly Transparent Diamond-like Carbon Anti-Reflecting Coating for Si Solar Cell Application, Amit Banerjee and Debajyoti Das, Proceedings of the 58th DAE Solid State Physics Symposium (DAE-SSPS-2013), Thapar University, Patiala, 2013, 142.
3. Synthesis of Thin Film Nano-Diamonds on Unheated Substrates by Secondary Plasma in MW-PECVD, Amit Banerjee and Debajyoti Das, 59th DAE Solid State Physics Symposium (DAE-SSPS-2014), VIT University, Vellore, 2014, 109.
4. Self-assembled nc-Si:H Thin Films by Low-pressure Planar Inductively Coupled Plasma CVD for Applications in nc-Si Solar Cells, Debajyoti Das and Amit Banerjee, 59th DAE Solid State Physics Symposium (DAE-SSPS-2014), VIT University, Vellore, 2014, 101.
5. Nano-Diamond Thin Film on Unheated Substrates: Synthesis and Optimization by MW-PECVD, Amit Banerjee and Debajyoti Das, 2nd International Conference on Nanotechnology (ICNT 2015) and Indo-USA joint Symposium on New Approaches to Energy Harvesting: Alternative to fossil fuel, HIT, Haldia, West Bengal, 2015, 123 (ISBN: 978-81-927756-2-3).
6. Further optimization of Superior Quality Hydrogenated Diamond-like Carbon Anti-Reflection Coating for Silicon Solar Cell Application, Amit Banerjee and Debajyoti Das, 4th National Conference on Advances in Metrology (AdMet 2015), CSIR-CMERI, Durgapur, West Bengal, 2015, 39.
7. Development of Commercially Viable Diamond Like Carbon Anti-Reflection Coatings for Silicon Solar Cells, Amit Banerjee and Debajyoti Das, 33th Young Physicist Colloquium (YPC, by Indian Physical Society), SINP, 2015, 12.
8. Low Temperature Synthesis of Carbon Nano-structured Thin Films for Advanced Energy Applications, Amit Banerjee and Debajyoti Das, National Conference on Carbon Materials for Energy Applications, CSIR-NPL, New Delhi, 2015, 21.
9. Nano-diamond and Diamond-like Carbon Thin Films for Anti-Reflecting Coating Application on Silicon Solar Cells, Amit Banerjee and Debajyoti Das, 5th International Conference on Advances in Energy Research (ICAER-2015), IIT Bombay, Bombay, 2015, Paper No-368, 272.
10. Thin Film Anti-friction Carbon Nano-Coatings For Advanced Industrial Applications, Santosh Singh, Amit Banerjee, Debajyoti Das, Rashmiranjan Sahoo , National Conference on Nanotechnology: Materials and Applications (NCoN:M&A 2016), Jadavpur University, Kolkata, 2016, 14.
11. Width Dependence of Platinum and Titanium Thermistor Characteristics for Application in Room-Temperature Antenna-Coupled Terahertz Microbolometer, Amit Banerjee, Satoh Hiroaki, Tiwari Ajay, Apriono Catur, Rahardjo Eko Tjipto, Hiromoto Norihisa, Inokawa Hiroshi, 48th International Conference on Solid State Devices and Materials (SSDM 2016), Tsukuba International Congress Center, Tsukuba, Japan, 2016, 695.
12. Comparative Investigation on Platinum and Titanium Thermistors for Room-Temperature Antenna-Coupled Terahertz Microbolometer Application, Amit Banerjee, Hiroaki Satoh, Tiwari Ajay, Norihisa Hiromoto and Hiroshi Inokawa, 29th International Microprocesses and Nanotechnology Conference (MNC 2016), ANA Crowne Plaza, Kyoto, Japan, 2016, 11P-11-106L.
13. Anti-friction Diamond-like Carbon Nanocoatings For Advanced Tribological Applications, Santosh Singh, Amit Banerjee, Debajyoti Das, Rashmi Ranjan Sahoo, 61st DAE Solid State Physics Symposium (DAE-SSPS), KIIT University, Bhubaneswar, India, 2016, 182.
14. Structural, Magnetic and Optical properties of Lanthanum Ferrite Nanoparticles with Application Perspective, Shovan Kumar Kundu, Dhiraj Kumar Rana, Ayan Mukherjee, Amit Banerjee, Debajyoti Das and Soumen Basu, 2nd International Conference on Recent Advances in Nanosciences and Nanotechnology, (ICRANN 2016), Special Centre for Nanosciences, Jawaharlal University (JNU), New Delhi, India, 2016, 29.
15. Investigation of Narrow Width Effect on Titanium Thermistor for Room-Temperature Antenna-Coupled Terahertz Microbolometer Application, Amit Banerjee, Hiroaki Satoh, Tiwari Ajay, Norihisa Hiromoto and Hiroshi Inokawa, 6th Shizuoka University International Symposium , Shizuoka University, Hamamatsu, Japan, 2016, 91.
16. Investigation of Narrow Width Effect on Platinum and Titanium Thermistors for Room-Temperature Antenna-Coupled Terahertz Microbolometer Fabrication, Amit Banerjee, Hiroaki Satoh, Ajay Tiwari, Norihisa Hiromoto and Hiroshi Inokawa, International Symposium toward the Future of Advanced Researches, Shizuoka University, Hamamatsu, Japan, 2017, 95.
17. Optimization of Narrow Width Effect on Titanium Thermistor for Room-Temperature Antenna-Coupled Terahertz Microbolometer Fabrication, Amit Banerjee, Hiroaki Satoh, Ajay Tiwari, Norihisa Hiromoto and Hiroshi Inokawa, 64th Japan Society of Applied Physics (JSAP) spring meeting, PACIFICO Yokohama, Yokohama, Japan, 2017, 16a-421-1, 03-373.

18. Effect of Mn^{2+} Doping on Optical and Electrical Properties of Lanthanum Ferrite Nanoperticles, Shovan Kumar Kundu, Dhiraj Kumar Rana, Ayan Mukherjee, Amit Banerjee, Debajyoti Das and Soumen Basu, The 2nd International Conference on Emerging Materials Characterization & Application (EMCA-2017), National Institute of Technology Durgapur, Durgapur, India, 2017, 33.
19. Low Temperature Nanodiamond films for Anti-reflection, Protective Encapsulation and Radiation Stability in Space and Terrestrial Sloar Applications, Santosh Singh, Debajyoti Das, Amit Banerjee, 4th International Conference on Nanoscience and Nanotechnology, SRM University, Chennai, India, 2017, 291-293.
20. Tribological Investigation of DLC Nanocoatings prepared by RF Sputtering, Santosh Singh, Amit Banerjee, Debajyoti Das, Rashmi Ranjan Sahoo, 4th International Conference on Nanoscience and Nanotechnology, SRM University, Chennai, India, 2017, 60-62.
21. Optimization of Platinum and Titanium Thermistor in Uncooled Antenna-Coupled Terahertz Microbolometer Fabrication, Amit Banerjee, Hiroaki Satoh, Yash Sharma, Ajay Tiwari, Norihisa Hiromoto, Hiroshi Inokawa, 4th International Conference on Nanoscience and Nanotechnology, SRM University, Chennai, India, 2017, 37.
22. Optimization of Narrow Width Effect on Titanium Thermistor in Uncooled Antenna-Coupled Terahertz Microbolometer, Amit Banerjee, Hiroaki Satoh, Yash Sharma, Ajay Tiwari, Norihisa Hiromoto, Hiroshi Inokawa, 49th International Conference on Solid State Devices and Materials (SSDM 2017), Sendai International Center, Sendai, Japan, 2017, 29-30.
23. Study on THz antenna-coupled microbolometer with a fine meander structure, Norihisa Hiromoto, Amit Banerjee, M. Aoki, Hiroaki Satoh, and Hiroshi Inokawa, 78th JSAP Autumn Meeting (JSAP-OSA, Optical Society of America Joint Symposia), Fukuoka Convention Center, 2017, 03-528.
24. Room-Temperature Terahertz Microbolometer Arrays for Biomedical Imaging Applications, Amit Banerjee, Hiroaki Satoh, Yash Sharma, Norihisa Hiromoto, Hiroshi Inokawa, 15th World Medical Nanotechnology Congress, Osaka, Japan, 2017, 15.
25. Fabrication of Uncooled Antenna-Coupled Terahertz Microbolometer Arrays, Amit Banerjee, Hiroaki Satoh, Yash Sharma, Norihisa Hiromoto, Hiroshi Inokawa, The 19th Takayanagi Kenjiro Memorial Symposium Toward Advanced Imaging Science Creation – From quantum physics to photonic and medical applications, Research Institute of Electronics, Shizuoka University, Japan, 89, 2017.
26. Characterization of Room-Temperature Terahertz Antenna-Coupled Bolometers with Different Sensors: MOSFET, PN Junction Diode and Resistor of Silicon , Durgadevi Elamaran, Yuyo Suzuki, Hiroaki Satoh, Amit Banerjee, Norihisa Hiromoto, Hiroshi Inokawa, The 19th Takayanagi Kenjiro Memorial Symposium Toward Advanced Imaging Science Creation – From quantum physics to photonic and medical applications, Research Institute of Electronics, Shizuoka University, Japan, 77, 2017.
27. Fabrication Features of Novel Nanophotonic Devices for Imaging Applications: Single Photon Detector and THz Detector, Yash Sharma, Hiroaki Satoh, Amit Banerjee, Hiroshi Inokawa, The 19th Takayanagi Kenjiro Memorial Symposium Toward Advanced Imaging Science Creation – From quantum physics to photonic and medical applications, Research Institute of Electronics, Shizuoka University, Japan, 215, 2017.
28. Study on THz antenna-coupled microbolometer with a thermistor of fine meander line, Norihisa Hiromoto, Amit Banerjee, M. Aoki, Hiroaki Satoh, and Hiroshi Inokawa, The Japan Society of Infrared Science and Technology) Symposium 2017.
29. Fabrication of Room Temperature Terahertz Microbolometer Arrays For Biomedical Imaging Applications, Amit Banerjee, Hiroaki Satoh, Yash Sharma, Norihisa Hiromoto, Hiroshi Inokawa, Indian Chemical Engineering Congress [CHEMCON- 2017, http://chemcon2017.com/], HIT, West Bengal, India, December 27-30, 85, 2017.
30. Terahertz Microbolometer Arrays for Biomedical Imaging, Amit Banerjee, Hiroaki Satoh, Yash Sharma, Norihisa Hiromoto, Hiroshi Inokawa, 2018 Global Workshop on Functional Materials and Devices, Nanyang Executive Center, Nanyang Technological University (NTU), Singapore [http://soiree-forum.org/gwfmd2018], Jan 10-13, 47, 2018.
31. Study on NEP for optimization of THz Antenna-Coupled Ti Microbolometers with Straight and Meander Shaped Thermistors, Durgadevi Elamaran, Amit Banerjee, Hiroaki Satoh, Norihisa Hiromoto, Hiroshi Inokawa, 65th JSAP Spring Meeting, WASEDA University, Japan, 2018 (Submission No.:C003590).
32. Antenna-Coupled Titanium Microbolometers with Straight and Meander-Shape Thermistors for Terahertz Wave Detection, Durgadevi Elamaran, Amit Banerjee, Hiroaki Satoh, Norihisa Hiromoto, Hiroshi Inokawa, 4th International Symposium toward the Future of Advanced researches in Shizuoka University 2018.
33. Terahertz Microbolometer Arrays for Biomedical Imaging Applications, Amit Banerjee, Hiroaki Satoh, Durgadevi Elamaran, Yash Sharma, Norihisa Hiromoto, Hiroshi Inokawa, International conference on

Emerging Trend in Engineering and Science [ETES-2018: http://www.aecetes.org/international.html], at Asansol Engineering College, Asansol, West Bengal, India, March 23-24, 2018, 5 .

34. Microfabricated Electron Sources for Direct Cathode Projection Lithography, C. Peeris, W. K. Ang, A. Banerjee, B. Pranesh, and A. Khursheed, International conference on Emerging Trend in Engineering and Science [ETES-2018: http://www.aecetes.org/international.html], at Asansol Engineering College, Asansol, West Bengal, India, March 23-24, 2018,4.
35. Terahertz Microbolometer Arrays for Advanced Imaging Applications, Amit Banerjee, Hiroaki Satoh, Durgadevi Elamaran, Yash Sharma, Norihisa Hiromoto, Hiroshi Inokawa, International Conference on Contemporary Advances in Innovative & Applicable Information Technology [ICCAIAIT, keical.edu.in], at Kingston Educational Institute (KEI), Barasat, West Bengal, India, March 24-25, 2018.
36. Antenna-Coupled Terahertz Microbolometers with Meander Structures: the Comparison of Titanium and Platinum Thermistors, Norihisa Hiromoto, Amit Banerjee, Durgadevi Elamaran, Hiroaki Satoh, C. Apriono, D. Itoh, E. Bruendermann, E. T. Rahardjo, Hiroshi Inokawa, 2018 43rd International Conference on Infrared, Millimeter and Terahertz Waves (IRMMW THz-2018), at Nagoya Congress Center, Nagoya, JAPAN, 9 -14 September 2018.
37. Mapping Materials Science Properties on the Nanoscale by Secondary Electron Energy Spectrometers in the SEM, A. Khursheed, H. Weiding, A. Banerjee, Recent Trends in Charged Particle Optics and Surface Physics Instrumentation, Bystřice nad Pernštejnem, Czech Republic, 4 June - 8 June 2018.
38. Micro-fabricated Individual CNT Point Cathode Field Emission Electron Source for Focused Electron Beam Applications, X. Shao, A. Banerjee, A. Khursheed, Material Research Society (MRS) Fall meeting, Boston, Massachusetts, Nov 25-30 2018, NM01.04.15,
39. Antenna-Coupled Terahertz Microbolometers with Meander Structures of Titanium and Platinum Thermistors, N. Hiromoto, A. Banerjee, E. Durgadevi, H. Satoh, M. Aoki, D. Itoh, E. Bruendermann, C. Apriono, E. T. Rahardjo, and H. Inokawa, 79th JSAP Autumn Meeting 2018 (September 18 - 21, Nagoya Congress Center, Nagoya, Japan).
40. Nanodevices for Photodetection Applications, Hiroshi Inokawa, Hiroaki Satoh, Amit Banerjee, Yash Sharma, Durgadevi Elamaran, Anitharaj Nagarajan, Alka Singh, Tomoki Nishimura, 5th International Conference on Nanoscience and Nanotechnology, Jan 28-30, 2019, SRM University, Chennai, India.
41. On-chip Integratable Terahertz Detector for Biomedical Applications, Amit Banerjee, Hiroaki Satoh, Durgadevi Elamaran, Yash Sharma, Norihisa Hiromoto, Hiroshi Inokawa1*Recent Advances in Informatics, Communication, Management, Health & Applied Sciences (RAICMHAS-2019), Brainware University, Kolkata, 2nd-3rd Feb, 2019.
42. Mapping Material Science Properties on the Nanoscale by Secondary Electron Energy Spectrometers in the SEM, International Workshop on Secondary Electron Spectromicroscopy and its Material Science Applications, A. Khursheed, H. Weiding, and A. Banerjee, National University of Singapore, Singapore, 6th - 7th June 2019, 10-11
43. Material Contrast of Metallic Samples with Full-range Scattered Electron Energy Spectroscopy in the SEM , International Workshop on Secondary Electron Spectromicroscopy and its Material Science Applications, H. Weiding, A. Banerjee and A. Khursheed, National University of Singapore, Singapore, 6th -7th June 2019, 12-13
44. High Responsivity and Low NEP of Room-Temperature Terahertz Antenna-Coupled Microbolometers with Meander Titanium Thermistor, Norihisa Hiromoto, Amit Banerjee, Durgadevi Elamaran, Makoto Aoki, Catur Apriono, Hiroaki Satoh, Erik Bruendermann, Eko Tjipto Rahardjo, and Hiroshi Inokawa, IEEE International Conference on Infrared, Millimeter, and Terahertz Waves, 44th IEEE-IRMMW-THz 2019, Paris, 1-6th Sept 2019.
45. Impact of Downscaling on Terahertz Antenna-Coupled Bolometers, Hiroshi Inokawa, Amit Banerjee, Durgadevi Elamaran, Hiroaki Satoh, Norihisa Hiromoto, 16th International Conferene on Quality in Research (QiR), 22-24, July 2019, Padang, Indonesia
46. Room-Temperature Terahertz Antenna-Coupled Microbolometers with Titanium Thermistor and Heater, Norihisa Hiromoto, Amit Banerjee, Durgadevi Elamaran, Makoto Aoki, Catur Apriono, Hiroaki Satoh, Erik Bruendermann, Eko Tjipto Rahardjo, and Hiroshi Inokawa, 16th International Conferene on Quality in Research (QiR), 22-24, July 2019, Padang, Indonesia
47. Secondary Electron Energy Spectroscopy For Semiconductor Characterization, Weiding Han, Amit Banerjee, Anjam Khursheed, 10th International Conference on Materials for Advanced Technologies (ICMAT 2019), 23 - 28 June 2019, Singapore.

48. Nanometer-Scale Photodetectors: Opportunity and Challenge, Hiroshi Inokawa, Hiroaki Satoh, Amit Banerjee, Yash Sharma, Durgadevi Elamaran, Anitharaj Nagarajan, Alka Singh, Tomoki Nishimura, International Conference on Precision, Meso, Micro & Nano Engineering, COPEN-11, IIT Indore on Dec. 12-14, 2019.
49. Electron-optical Characterization of High-aspect-ratio Single CNT Cold Field Emitters, Amit Banerjee, Xiuyuan Shao, Anjam Khursheed, 2nd European Conference on Smart Nanomaterials (SNAIA2019), https://snaia2019.com, École Nationale Supérieure de Chimie de Paris, ParisTech, Paris, France, from 10th to 13th of December 2019.
50. Microspectroscopic Characterization in the Scanning Electron Microscope, Han Weiding, Amit Banerjee, Anjam Khursheed, 2nd European Conference on Smart Nanomaterials (SNAIA2019), https://snaia2019.com, École Nationale Supérieure de Chimie de Paris, ParisTech, Paris, France, from 10th to 13th of December 2019.
51. Self-shielding permanent ring-magnet immersion objective lens for multi-column focused electron-beam systems, Pranesh Balamuniappan, Wei Kean Ang, Amit Banerjee, Anjam Khursheed, 32nd International Microprocesses and Nanotechnology Conference (MNC 2019), October 28-31, 2019, Hiroshima, Japan
52. Electron-optical Evaluation of a Conically Shaped CNT Electron Source, Xiuyuan Shao, Amit Banerjee and Anjam Khursheed, 32nd International Microprocesses and Nanotechnology Conference (MNC 2019), October 28-31, 2019, Hiroshima, Japan.
53. Design and Development of Uncooled Terahertz Detector Arrays as On-chip Integrated Medical Device, Amit Banerjee* Hiroaki Satoh, Durgadevi Elamaran, Norihisa Hiromoto, Hiroshi Inokawa, Functional Nanomaterials in Industrial & Clinical Applications: Academic-Industry- Clinician Meet (14 th to 16 th July 2020), UCLan, Preston, UK, 2020, by University of Central Lancashire, UK **(*Corresponding Author)**
54. Development of Room-Temperature Terahertz Detector Arrays Towards On-chip Integratable Medical Screening Devices, Amit Banerjee*, Hiroaki Satoh, Durgadevi Elamaran , Norihisa Hiromoto, Hiroshi Inokawa, IEEE International Conference on VLSI Device, Circuit and System (VLSI DCS-2020)**,** Kolkata, March 21st-22nd, 2020 **(*Corresponding Author)**
55. Design and Development of Terahertz Medical Screening Devices, Karthikeyan M P, Debarata Samanta, Amit Banerjee*, Arjya Roy, Hiroshi Inokawa, International Conference on Emerging Wireless Communication Technologies and Information Security [EWCIS 2020], Page No. i, Oct 8th-9th, 2020 at Amity University, Ranchi, India **(*Corresponding Author)**
56. Nanometer-Scale Photodeters for High Performance and Unique Functionality, Hiroshi Inokawa, Hiroaki Satoh, Amit Banerjee, Anitharaj Nagarajan, Revathi Manivannan, Alka Singh, Tomoki Nishimura, Koki Isogai, International Conference on Emerging Wireless Communication Technologies and Information Security [EWCIS 2020], Page No. 1, Oct 8th-9th, 2020 at Amity University, Ranchi, India.
57. Millimeter wave: A novel approach for integrating radar and communication for autonomous driving, M Chakraborty, A Banerjee, D Kandar, B Maji, International Conference on Emerging Wireless Communication Technologies and Information Security [EWCIS 2020], Page No. 31, Oct 8th-9th, 2020 at Amity University, Ranchi, India.
58. Proposal of Scaling Law in Room-Temperature Terahertz Microbolometer and its Experimental Verification, Hiroshi Inokawa, Norihisa Hiromoto, Hiroaki Satoh, Amit Banerjee, Durgadevi Elamaran, The 22nd Takayanagi Kenjiro Memorial Symposium, Toward Advanced Imaging Science Creation Advanced Nanovision Science Creation, Wednesday, November 25, 2020, Hamamatsu Campus, Shizuoka University, 3-5-1 Johoku, Naka-ku, Hamamatsu 432-8011, Japan
59. Terahertz Image Processing: A Boon to the Imaging Technology, Jayashree Karmakar, Debabrata Samanta, Amit Banerjee, Karthikeyan M P, International Conference on Advances in Data Science and Computing Technologies (ADSC-2022) will be organized by the Department of Computer Science, Kazi Nazrul University during 23rd -24th June 2022 at the Hotel Pride Plaza, New Town, and Kolkata. Conference Website: http://www.adsc2022.in/
60. Review on the Evolution of 6G and Terahertz Communication for Highspeed information processing, Pia Sarkar, Arijit Saha, Aditya Banerjee, Amit Banerjee, A. Y. Seteikin and I. G. Samusev, 20th Asia-Pacific Conference on Fundamental Problems of Opto- and Microelectronics (APCOM-2022), October 2-5, 2022 at the Presidium of the Far Eastern Branch of Russian Academy of Sciences (FEB RAS), Vladivostok, Russia, http://apcom.dvo.ru/2022/index.html
61. Prediction Model for Signal Attenuation in 5G and Beyond Communication, Pia Sarkar, Arijit Sahaa, Aditya Banerjee, Amit Banerjee, International Career Outreach Conference: Trends in Sustainable Design, Technology and Innovation, Asansol, WB, India, 26th -28th November 2022, pp. 22.

ADMINISTRATIVE ACHIEVEMENTS:

1. **Convenor,** International Career Outreach Conference: Trends in Sustainable Design, Technology and Innovation, Asansol, WB, India, 26th -28th November 2022
2. **Program Committee Member and Session Chair,** International Conference on Advances in Data Science and Computing Technologies (ADSC-2022) will be organized by the Department of Computer Science, Kazi Nazrul University during 23 rd -24 th June 2022 at the Hotel Pride Plaza, New Town, and Kolkata. Conference Website: http://www.adsc2022.in/
3. **Member, Technical Program Committee**, IEEE International Conference on VLSI Device, Circuit and System (VLSI DCS-2022), https://edu.ieee.org/in-msitceds/vlsidcs-2022/**,** Kolkata, Jan 19-20th, 2022.
4. **Publication Chair,** Emerging trends in Wireless Communication, Biomedical Engineering with Information Security, 9th-10th September 2021, Amity School of Engineering and Technology, Amity University Jharkhand, Ranchi, India [EWCIS2021, https://amity.edu/aset/ewcis2021/]
5. **Member, International Advisory Committee,** International Conference On Innovative Research In Renewable Energy Technologies (IRRET-2021) 25th-27th February, 2021, IMPS College, Malda, West Bengal, India, https://impsconfseries.org/
6. **Member, Advisory Committee,** International Web Conference on Recent Trends and Developments in Applied Research and Industrial Practices 20th & 21st November 2020, Kolkata, Amity University, Kolkata, www.icrtdarip.com
7. **Coordinator,** National Webinar on Literature and Culture Texts in Contexts, 29th Nov 2020, Bidhan Chandra College, India. https://youtu.be/LsgVft-hgtc
8. **Joint Convenor,** E-workshop on Intellectual Property Rights, 19th August 2020, Bidhan Chandra College, India, https://youtu.be/JKhH2i9EXZ0
9. **Coordinator,** 1st International Webinar on The Challenges of the corporate ethics in international HRM, 10th September 2020, Bidhan Chandra College, India, https://youtu.be/CcupZjsF8do
10. **Convenor,** 2nd International Career Outreach E-Workshop Hands-on Introduction to Python 12th September 2020, Bidhan Chandra College, India, https://youtube.com/playlist?list=PL1GcTeBCjs9-HFAzyNGj1UMqdeWAJBPrZ
11. **Coordinator,** National Webinar : Indian Foreign Policy in the Post-Pandemic World : Perspectives and Prospects, Sep 30, 2020, Bidhan Chandra College, India.
12. **Joint Convenor,** Second E-Workshop on Intellectual Property Rights, 15th December 2020, Bidhan Chandra College, India, https://youtube.com/playlist?list=PL1GcTeBCjs98ggLk-vhZBSyGXLva1sIW9
13. **Member, Technical Program Committee,** International Conference on Machine Intelligence and Data Science Applications (MIDAS 2020), https://www.icmidas.in/tcp.html, organized by University of Petroleum & Energy Studies (UPES), in association with IET, Dehradun, India, on March 27th, 2020 - March 28th, 2020.
14. **Member, International Advisory Committee,** International Conference on Advances in Engineering Science Management & Technology 2020 (ICAESMT-20)**,** on 1st-2nd May 2020 at Uttaranchal Institute of Technology, Uttaranchal University, Dehradun, India.
15. **Convenor,** 1st International Career Outreach E-Workshop, 21st June 2020, Bidhan Chandra College, India, https://youtube.com/playlist?list=PL1GcTeBCjs9-MI3pwTPNP5XKg7Z9YTWki
16. **Member, International Advisory Committee,** International Conference on Emerging Wireless Communication Technologies and Information Security [EWCIS 2020], https://www.ewcis.in/committee.php**,** Oct 8th-9th, 2020 at Amity University, Ranchi, India.
17. **Member, International Advisory Committee,** International Conference on Recent Trends in Engineering and Technology [RTET-2020], http://eve.siplhub.com/**,** April 24th - 25Th , 2020 at Mallabhum Institute of Technology, Bishnupur, Bankura, W.B., India.
18. **Member, International Advisory Committee**, IEEE WITCON ECE-2019, http://witconece.org, Skyline University College, Dehradun, India, on 23-24 November, 2019.
19. **Member, International Advisory Committee**, IEEE International Conference on Digitization (IEEE-ICD-2019), http://icd.skylineuniversity.ac.ae/, Skyline University College, Sharjah, UAE, November 18 and 19, 2019.
20. **Member, International Advisory Committee**, IEEE International Conference on Emerging Trends on Sustainable Technology and Engineering Applications (NCETSTEA-2020), http://ncetstea2020.org**,** BCREC, Durgapur, Feb 7th-8th, 2020.
21. **Editorial Advisory Board Member,** Book "Smart Medical Data Sensing and IoT Systems Design in Healthcare", IGI Global, https://www.igi-global.com/publish/call-for-papers/call-details/3566.

22. **Member, International Advisory and Program Committee**, IEEE International Conference on VLSI Device, Circuit and System (VLSI DCS-2020), http://sites.ieee.org/sb-msitceds/vlsi-dcs-2020/**,** Kolkata, March 21st-22nd, 2020.
23. **External Visiting Faculty**, Brainware University, https://www.brainwareuniversity.ac.in/, Kolkata, 9th July-Till Date
24. **Secretary, Core Organizing Committee**, International Workshop on Secondary Electron Spectromicroscopy and its Material Science Applications (http://e6nanofab.nus.edu.sg/upcoming-events/secondary-electron-spectromicroscopy-and-its-material-science-applications-workshop/), Faculty of Engineering, National University of Singapore, Singapore, 6th -7th June 2019.
25. **Secretary, Core Organizing Committee**, NUS Hitachi Workshop, Faculty of Engineering, National University of Singapore, Singapore, 6th -7th June 2019.
26. **Member, Technical Program Committee,** in the 5th International Conference on Next Generation Computing Technologies [NGCT-2019, www.ngct.org/ngct2019], organized by and to be held at University of Petroleum & Energy Studies (UPES), Dehradun, India, 8th-9th Nov 2019.
27. **Member, International Advisory and Program Committee**, IEEE Conference on Innovative Sustainable Computational Technologies (IEEE ICISCT-2019), www.geuicisct.com (IEEE ICISCT 2019)**,** Graphic Era University, Dehradun, Oct 11-12, 2019.
28. **Member, International Advisory and Program Committee,** International Conference on Advanced Engineering, Science, Management and Technology – 2019" (ICAESMT19) being organized by Uttaranchal Institute of Technology, Uttaranchal University, Dehradun (RAICMHAS-2019), http://icaesmt19.uttaranchaluniversity.ac.in, March 14-15, 2019.
29. **Member, International Advisory and Program Committee**, Recent Advances in Informatics, Communication, Management, Health & Applied Sciences (RAICMHAS-2019), https://www.brainwareuniversity.ac.in/raicmhas-2019/**,** Brainware University, Kolkata, 2nd-3rd Feb, 2019.
30. **Member, Technical Committee, Nano-Fabrication Facility** (NUS E6NanoFab), Department of Electrical and Computer Engineering, National University of Singapore, Singapore [http://e6nanofab.nus.edu.sg/].
31. **Member, Technical Program Committee,** in the IEEE Fifth International Conference on Parallel, Distributed and Grid Computing (IEEE PDGC 2018), organized by and to be held at University of Petroleum & Energy Studies (UPES), Dehradun, India, 20-22 December 2018, https://conferences.ieee.org/conferences_events/conferences/conferencedetails/44302 .
32. **Member, Technical Program Committee and Panel Editor and Reviewer for conference proceedings in Springer,** in the 4rd International Conference on Next Generation Computing Technologies [NGCT-2018, www.ngct.org/ngct2018], organized by and to be held at University of Petroleum & Energy Studies (UPES), Dehradun, India, 26th-27th Oct 2018.
33. **Member, Organizing Committee Board (OCM),** in the International Microfluidics Congress during August 13-14. The event will be held at San Diego, USA [https://www.meetingsint.com/conferences/microfluidics/ocm].
34. **Member, Organizing Committee Board (OCM),** in the 16th World Medical Nanotechnology Congress, September 03-04, 2018 Tokyo, Japan [https://medicalnanotechnology.conferenceseries.com/organizing-committee.php].
35. **Member, Organizing Committee Board (OCM),** in the World Congress on Materials Science and Engineering scheduled during August 23-25, 2018 at Amsterdam, Netherlands [https://materialsscience.euroscicon.com/organizing-committee].
36. **Member, International Advisory Committee,** in the International conference on Emerging Trend in Engineering and Science (ETES-2018), organized at Asansol Engineering College, Asansol, West Bengal, India, March, 2018 [http://www.aecetes.org/international.html].
37. **Panel Thesis Reviewer,** for Electronics and Communication Dept. at the Indian Institute of Engineering Science, and Technology (IIEST) and Mody University of Science and Technology.
38. **Lead Guest Editor,** Special issue on **Emerging Trends in Photonics: Materials to Devices**, Nanoscience & Nanotechnology-Asia, **Bentham Science Publishing**, 2017 [https://benthamscience.com/journals/nanoscience-and-nanotechnology-asia/special-issues].
39. **Co-founder and Council Member, Technology Research Academy** [http://techresacademy.com].
40. **Certified Reviewer for AIP Conference Proceedings**, volume 1731: DAE Solid State Physics Symposium 2015 [ISBN: 9780735413788; https://printorders.aip.org/proceedings/1731].
41. **Member, Technical Program Committee and Panel Editor and Reviewer for conference proceedings in Springer,** in the 3rd International Conference on Next Generation Computing Technologies [NGCT-2017,

www.ngct2017.in], organized by and to be held at University of Petroleum & Energy Studies (UPES), Dehradun, India, 30th-31st Oct 2017.

42. **Member, International Advisory Committee,** in the International Conference on Contemporary Advances in Innovative & Applicable Information Technology [ICCAIAIT, keical.edu.in], organized with technical sponsorship of Computer Society of India (CSI) and to be held at Kingston Educational Institute (KEI), Barasat, West Bengal, India, November, 2017.
43. **Member, International Advisory Committee and Technical Committee** in 70th Indian Chemical Engineering Congress [CHEMCON- 2017, http://chemcon2017.com/] and Indo-USA joint Symposium, to be held at HIT, West Bengal, India, December 27-30, 2017, organized by Indian Institute of Chemical Engineers (IIChE).
44. **Specially Appointed Assistant Professor (Visiting Position),** Department of Electronics and Communications Engineering, Faculty of Engineering & Technology, NSHM Knowledge Campus, Durgapur, India, from 26th May 2017- till date [http://nfet.nshm.com/faculty/dr-amit-banerjee/].
45. **Member, International Advisory Committee** in the International Conference on Emerging Trends in Computing, Communication and Control [ICETC-2017, http://nfet.nshm.com/icetc3/index.php], NSHM Knowledge Campus, West Bengal, India, March 15-16, 2017.
46. **Member, Japan Society of Applied Physics** [Membership Number: 0099882].

PERSIONAL DETAILS:

EXTRA CURRICULAR ACTIVITIES: Best Photography Award at the CULTVISION 2013, Kolkata.
PERMANENT ADDRESS: Durgapur, West Bengal, India.

REFERENCES

REFERENCES	REFERENCES
Professor Hiroshi Inokawa, Leader Nanosystem Integration Laboratory, Advanced Device Research Division, Research Institute of Electronics, Shizuoka University, Hamamatsu 432-8011, Japan Email: inokawa.hiroshi@shizuoka.ac.jp	Professor Debajyoti Das (Ph.D. Thesis Guide) Sr. Prof. and Head, Energy Research Unit, Chairperson, Centre for Advanced Materials, Indian Association for the Cultivation of Science, Jadavpur, Kolkata-700032, India Email: erdd@iacs.res.in
Professor Norihisa Hiromoto Leader Terahertz Technology Laboratory, Graduate School of Science and Technology, Shizuoka University, Hamamatsu 432-8011, Japan Email: hiromoto.norihisa@shizuoka.ac.jp	Prof. Tapas Sen, FRSC, FHEA, School of Natural Sciences, Central Lancashire University, United Kingdom Email: TSen@uclan.ac.uk
Professor Anjam Khursheed, Microelectronic Technologies & Devices Department of Electrical and Computer Engineering, National University of Singapore, Singapore Email: eleka@nus.edu.sg	Professor Kuei-Hsien Chen (Project Guide) Director, Institute of Atomic & Molecular Sciences, Academia Sinica, Taipei, Taiwan Email: chenkh@pub.iams.sinica.edu.tw