K. J. SANKARAN

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EDUCATION

Ph.D, Materials Science and Engineering, National Tsing Hua University, Taiwan (2013).
M.Sc, Materials Science (Ist Division), College of Engineering, Anna University, India (2007).
B.Sc, Physics (Ist Division, Rank Holder), Madurai Kamaraj University, India (2005).
Higher Secondary (Ist Division), Devangar Higher Secondary School, Tamilnadu, India (2002).
Secondary (Ist Division), Devangar Higher Secondary School, Tamilnadu, India (2000).

AWARDS/SCHOLARSHIPS

- FWO Postdoctoral Research Fellowship, Belgium (2015–2018).
- FWO Pegasus Marie Curie Postdoctoral Research Fellowship, Belgium (2014–2015).
- Postdoctoral Research, National Science Council, Taiwan (2013–2014).
- National Tsing Hua University Outstanding Student Scholarship (2010–2013).
- Best Poster Presentation Award: AVS-IPW 2011, Taiwan.
- Best Poster Presentation Award: TACT Student's Symposium 2013, Taiwan.
- Best Oral Presentation Award: TACT Student's Symposium 2014, Taiwan.
- Best Poster Presentation Award: 7th International Symposium on Surface Science 2014, Japan.
- Best Poster Presentation Award: 13th New Diamond and Nano Carbons Conference 2019, Taiwan

RESEARCH INTERESTS

- Synthesis of low temperature grown diamond films on printed polymer substrates for flexible electronics.
- Diamond-Gallium nitride heterostructures for high power electronics.
- Synthesis of diamond films using graphene nucleation.
- Synthesis of hybrid diamond films (with CNT or graphene) for potential applications.
- Will to explore my knowledge and experience in synthesizing carbon related hybrid

materials and characterize the materials using transmission electron microscopy.

RELEVANT EXPERIENCE

- ✧ **Ph.D research**, Dept. of Materials Science and Engineering, National Tsing Hua University (2009–2013): *"Investigations of the Structural and Electron Field Emission Properties of Ultrananocrystalline Diamond Films (UNCD)".*
- ✧ **Senior Postdoctoral Researcher,** Hasselt University, Hasselt, Belgium (2018–2019): "*Low temperature grown nanocrystalline diamond films for potential applications*" sponsored by Hasselt University, Belgium.
- ✧ **FWO Postdoctoral Research Fellow**, Hasselt University, Hasselt, Belgium (2015–2018): "*Nanocrystalline Diamond-based Hybrid Thermionic Electron Emitters*" sponsored by FWO, Belgium.
- ✧ **FWO Research Grant**, Hasselt University, Hasselt, Belgium (2016–2017): "*Electrically conductive nanocrystalline diamond for microplasma cathode application*" sponsored by FWO, Belgium (40000 Euros).
- ✧ **FWO Pegasus Marie Curie Postdoctoral Research Fellow**, Hasselt University, Hasselt, Belgium (2014–2015): "*Field Enhanced Thermionic Electron Emission from Surface Treated n-type doped Nanocrystalline Diamond Nanostructures*" sponsored by FWO, Belgium.
- ✧ **Postdoctoral Research Fellow**, National Tsing Hua University, Hsinchu, Taiwan (2013–2014): "*Microstructural evolution of diamond films from plasma energetic species and their enhanced electrical properties*" sponsored by National Science Council, Taiwan.
- ✧ **Research Assistant**, Central Electrochemical Research Institute (CECRI), Karaikudi, India (2007–2009): *"Galvanic corrosion performance of Magnesium alloys in automotive applications"* sponsored by General Motors, USA.
- ✧ **M.Sc Thesis**, Dept. of Physics, College of Engineering, Anna University, Chennai, India (2007): *"Growth and Characterization of Boric acid doped Potassium dihydrogen phosphate crystals for non-linear optics applications"*.
- ✧ **M.Sc Summer Internship**, S N Bose National Centre for Basic Sciences, Kolkata, India (2006): *"The applicability of rigid band model to describe doping in realistic systems"*.

PUBLICATIONS IN INTERNATIONAL JOURNALS

Book chapter

Kamatchi Jothiramalingam Sankaran and Ken Haenen, *"Nitrogen Incorporated (Ultra)Nanocrystalline Diamond Films for Field Electron Emission Applications"* in Novel Aspects of Diamond (2nd Edition), Springer 2019, pp 123-171.

Refereed Journals

1. K. J. Sankaran, P. T. Joseph, N. H. Tai, and I. N. Lin, *"High dose N ion implantation effects on surface treated UNCD films,"* Diamond and Related Materials, 19, 927 (2010) (Peer reviewed).
   Impact Factor: 1.825.
2. Y. C. Lin, K. J. Sankaran, Y. C. Chen, C. Y. Lee, H. C. Chen, I. N. Lin, N. H. Tai, *"Enhancing electron field emission properties of UNCD films through nitrogen incorporation at high substrate temperature,"* Diamond and Related Materials, 20, 191 (2011) (Peer reviewed).
   Impact Factor: 1.913.
3. K. J. Sankaran, P. T. Joseph, H. C. Chen, N. H. Tai, and I. N. Lin, *"Investigation in the role of hydrogen on the properties of diamond films grown using Ar/H_2/CH_4 microwave plasma,"* Diamond and Related Materials, 20, 232 (2011) (Peer reviewed).
   Impact Factor: 1.913.
4. K. Y. Teng, H. C. Chen, H. Y. Chiang, C. C. Horng, H. F. Cheng, K. J. Sankaran, N. H. Tai, C. Y. Lee, I. N. Lin, *"The role of nano-graphite phase on the enhancement of electron field emission properties of ultrananocrystalline diamond films,"* Diamond and Related Materials, 24, 126 (2012) (Peer reviewed).
   Impact Factor: 1.913.
5. Kamatchi Jothiramalingam Sankaran, Kalpataru Panda, Balakrishnan Sundaravel, Huang-Chin Chen, I-Nan Lin, Chi-Young Lee, and Nyan-Hwa Tai, *"Engineering the Interface Characteristics of Ultrananocrystalline Diamond Films Grown on Au-Coated Si Substrates,"* ACS Applied Materials Interfaces, 4, 4169 (2012) (Peer reviewed).
   Impact Factor: 4.525.
6. Kalpataru Panda, N. Kumar, K. J. Sankaran, B. K. Panigrahi, S. Dash, H. C. Chen, I. Nan Lin, N. H. Tai, A.K. Tyagi, *"Tribological properties of ultrananocrystalline diamond and diamond nanorod films,"* Surface and Coatings Technology, 207, 535, (2012) (Peer reviewed).
   Impact Factor: 1.867.
7. K. J. Sankaran, J Kurian, H C Chen, C L Dong, C Y Lee, N H Tai and I N Lin, *"Origin of a needle-like granular structure for ultrananocrystalline diamond films grown in a N_2/CH_4 plasma,"* Journal of Physics D: Applied Physics, 45, 365303 (2012) (Peer reviewed).

Impact Factor: 2.544.

8. Kamatchi Jothiramalingam Sankaran, Srinivasu Kunuku, Shiu-Cheng Lou, Joji Kurian, Huang-Chin Chen, Chi-Young Lee, Nyan-Hwa Tai, Keh-Chyang Leou, Chulung Chen and I-Nan Lin, *"Microplasma illumination enhancement of vertically aligned conducting ultrananocrystalline diamond nanorods,"* Nanoscale Research Letters, 7, 522 (2012) (Peer reviewed).
   Impact Factor: 2.726.
9. Huang-Chin Chen, Kamatchi Jothiramalingam Sankaran, Shen-Chuan Lo, Li-Jiaun Lin, Nyan-Hwa Tai, Chi-Young Lee, and I-Nan Lin, *"Using an Au interlayer to enhance electron field emission properties of ultrananocrystalline diamond films,"* Journal of Applied Physics, 112, 103711 (2012) (Peer reviewed).
   Impact Factor: 2.168.
10. K. J. Sankaran, H. C. Chen, C. Y. Lee, N. H. Tai, and I. N. Lin, *"Fabrication of free-standing highly conducting ultrananocrystalline diamond films with enhanced electron field emission properties,"* Applied Physics Letters, 101, 241604 (2012) (Peer reviewed).
    Impact Factor: 3.844.
11. Jayakumar Shalini, Kamatchi Jothiramalingam Sankaran, Chung-Li Dong, Chi-Young Lee, Nyan- Hwa Tai, and I-Nan Lin, *"In situ detection of dopamine using nitrogen incorporated diamond nanowire electrode,"* Nanoscale, 5, 1159 (2013) (Peer reviewed).
    Impact Factor: 5.914.
12. Jayakumar Shalini, Yi-Chieh Lin, Ting-Hsun Chang, Kamatchi Jothiramalingam Sankaran, Huang-Chin Chen, I.-Nan Lin, Chi-Young Lee, Nyan-Hwa Tai, and I-Nan Lin, *"Ultra-nanocrystalline diamond nanowires with enhanced electrochemical properties,"* Electrochemicia Acta, 92, 9 (2013) (Peer reviewed).
    Impact Factor: 3.777.
13. Kamatchi Jothiramalingam Sankaran, Yen-Fu Lin, Wen-Bin Jian, Huang-Chin Chen, Kalpataru Panda, Balakrishnan Sundaravel, Chung-Li Dong, Nyan-Hwa Tai and I-Nan Lin, *"Structural and electrical properties of conducting diamond nanowires,"* ACS Applied Materials and Interfaces, 5, 1294 (2013) (Peer reviewed).
    Impact Factor: 5.008.
14. K. J. Sankaran, H. C. Chen, B. Sundaravel, C. Y. Lee, N. H. Tai, and I. N. Lin, *"Gold ion implantation induced high conductivity and enhanced electron field emission properties in ultrananocrystalline diamond films,"* Applied Physics Letters, 102, 061604 (2013) (Research Highlights of APL) (Peer reviewed).
    Impact factor: 3.794.
15. Kamatchi Jothiramalingam Sankaran, Joji Kurian, Niranjan Kumar, Huang-Chin Chen, Ashok Kumar Tyagi, Sitaram Dash, Chi-Young Lee, Nyan-Hwa Tai and I-Nan Lin,

"Improvement in Tribological Properties by Modification of Grain Boundary and Microstructure of Ultrananocrystalline Diamond Films," ACS Applied Materials and Interfaces, 5, 3614 (2013) (Peer reviewed).
Impact Factor: 5.008.

16. K. J. Sankaran, N. Kumar, S. Dash, H. C. Chen, A. K. Tyagi, N. H. Tai, and I. N. Lin, *"Significance of grain and grain boundary phases on the tribological behavior of ultrananocrystalline diamond films,"* Surface and Coatings Technology, 232, 75 (2013) (Peer reviewed).
Impact factor: 1.941.
17. N. Kumar, Radhika Ramadoss, A. T. Kozakov, K. J. Sankaran, S. Dash, A. K..Tyagi, N. H. Tai and I-Nan Lin, *"Humidity-dependent friction mechanism in an ultrananocrystalline diamond film,"* Journal of Physics D: Applied Physics, 46, 275501 (2013) (Peer reviewed).
Impact factor: 2.528.
18. Srinivasu Kunuku, Kamatchi Jothiramalingam Sankaran, Cheng-Yen Tsai, Wen-Hao Chang, Nyan-Hwa Tai, Keh-Chyang Leou, and I-Nan Lin, "*Investigations on Diamond Nanostructuring of Different Morphologies by the Reactive-Ion Etching Process and Their Potential Applications*," ACS Applied Materials and Interfaces, 5, 7439 (2013) (Peer reviewed).
Impact factor: 5.008.
19. K. J. Sankaran, K. Srinivasu, H. C. Chen, C. L. Dong, K. C. Leou, C. Y. Lee, N. H. Tai, and I. N. Lin, *"Improvement in plasma illumination properties of ultrananocrystalline diamond films by grain boundary engineering,"* Journal of Applied Physics, 114, 054304 (2013) (Peer reviewed).
Impact factor: 2.210.
20. Kamatchi Jothiramalingam Sankaran, Niranjan Kumar, Huang-Chin Chen, Chung-Li Dong, Ashok Bahuguna, Sitaram Dash, Ashok Kumar Tyagi, Chi-Young Lee, Nyan-Hwa Tai, and I-Nan Lin, *"Near Frictionless Behavior of Hydrogen Plasma Treated Diamond Nanowire Films,"* Science of Advanced Materials, 5, 1, (2013) (Peer reviewed).
Impact factor: 2.509.
21. R. Radhika, N. Kumar, K. J. Sankaran, R. Dumpala, S. Dash, M. S. R. Rao, D. Arivuoli, A.K. Tyagi, N. H. Tai, I-Nan Lin, *"Extremely high wear resistance and ultra-low friction behavior of oxygen-plasma treated nanocrystalline diamond films,"* Journal of Physics D: Applied Physics, 46, 425304 (2013) (Peer reviewed).
Impact factor: 2.528.
22. K. J. Sankaran, K. Srinivasu, K. C. Leou, N. H. Tai, and I. N. Lin, *"High stability electron field emitters made of nanocrystalline diamond coated carbon nanotubes,"* Applied Physics Letters, 103, 251601 (2013) (Peer reviewed).

Impact factor: 3.794.

23. Kamatchi Jothiramalingam Sankaran, Manekkathodi Afsal, Shiu-Cheng Lou, Huang-Chin Chen, Chulung Chen, Chi-Young Lee, Lih-Juann Chen, Nyan-Hwa Tai and I-Nan Lin, *"Electron field emission enhancement of vertically aligned ultrananocrystalline diamond coated ZnO core-shell heterostructured nanorods,"* Small, 10, 179 (2014) (Peer reviewed).
    Impact Factor: 7.823.
24. Jayakumar Shalini, Kamatchi Jothiramalingam Sankaran, Huang-Chin Chen, Chi-Young Lee, Nyan- Hwa Tai, and I-Nan Lin, *"Mediatorless N_2 incorporated Diamond Nanowire Electrode for Selective Detection of NADH at Stable Low Oxidation Potential,"* Analyst, 139, 778 (2014) (Peer reviewed).
    Impact factor: 3.969.
25. Jayakumar Shalini, Kamatchi Jothiramalingam Sankaran, Huang-Chin Chen, Chi-Young Lee, Nyan- Hwa Tai, and I-Nan Lin, *"An Amperometric Urea Bisosensor based on Covalent Immobilization of Urease on N_2 Incorporated Diamond Nanowire Electrode,"* Biosensors and Bioelectronics, 56, 64 (2014) (Peer reviewed).
    Impact factor: 6.451.
26. Radhika Ramadoss, Niranjan Kumar, Kamatchi Jothiramalingam Sankaran, Pankaj Das, T. R. Ravindran, Sitaram Dash, Ashok Kumar Tyagi, Nyan-Hwa Tai, and I-Nan Lin, *"Temperature Dependent Tribological Studies and Phase Transformation in Ultra-Nanocrystalline Diamond Films",* Science of Advanced Materials, 6, 1 (2014) (Peer reviewed).
    Impact factor: 2.509.
27. K. J. Sankaran, N. H. Tai, and I. N. Lin, *"Flexible electron field emitters fabricated using conducting ultrananocrystalline diamond pyramidal microtips on polynorbornene films,"* Applied Physics Letters, 104, 031601 (2014) (Peer reviewed).
    Impact factor: 3.794.
28. K. J. Sankaran, K. Panda, B. Sundaravel, N. H. Tai, and I. N. Lin, *"Enhancing electrical conductivity and electron field emission properties of ultrananocrystalline diamond films by copper ion implantation and annealing,"* Journal of Applied Physics, 115, 063701 (2014) (Peer reviewed).
    Impact factor: 2.210.
29. Kamatchi Jothiramalingam Sankaran, Huang Chin Chen, Kalpataru Panda, Balakrishnan Sundaravel, Chi-Young Lee, Nyan-Hwa Tai, and I-Nan Lin, *"Enhanced Electron Field Emission Properties of Conducting Ultrananocrystalline Diamond Films after Cu and Au Ion Implantations,"* ACS Applied Materials and Interfaces, 6, 4911 (2014) (Peer reviewed).
    Impact factor: 5.008.

30. A. Saravanan, B. R. Huang, K. J. Sankaran, C. L. Dong, N. H. Tai, and I. N. Lin, *"Fast growth of ultrananocrystalline diamond films by bias-enhanced nucleation and growth process in CH_4/Ar plasma,"* Applied Physics Letters, 104, 181603 (2014) (Peer reviewed).
Impact factor: 3.794.
31. Kalpataru Panda, Kamatchi Jothiramalingam Sankaran, Binaya Kumar Panigrahi, Nyan-Hwa Tai, and I-Nan Lin, *"Direct Observation and Mechanism for Enhanced Electron Emission in Hydrogen Plasma-Treated Diamond Nanowire Films,"* ACS Applied Materials and Interfaces, 6, 8531 (2014) (Peer reviewed).
Impact factor: 5.008.
32. Tinghsun Chang, Srinivasu Kunuku, Kamatchi Jothiramalingam Sankaran, Keh-Chyang Leou, Nyan-Hwa Tai, and I-Nan Lin, *"Enhancing the stability of microplasma device utilizing diamond coated carbon nanotubes as cathode materials,"* Applied Physics Letters, 104, 223106 (2014) (Peer reviewed).
Impact factor: 3.794.
33. Adhimoorthy Saravanan, Bohr-Ran Huang, Kamatchi Jothiramalingam Sankaran, Srinivasu Kunuku, Chung-Li Dong, Keh-Chyang Leou, Nyan-Hwa Tai, and I-Nan Lin, *"Bias-enhanced Nucleation and Growth Processes for Ultrananocrystalline Diamond Films in Ar/CH_4 Plasma and Their Enhanced Plasma Illumination Properties,"* ACS Applied Materials and Interfaces, 6, 10566 (2014) (Peer reviewed).
Impact factor: 5.008.
34. R. Radhika, N. Kumar, A.T. Kozakov, K.J. Sankaran, S. Dash, A.K. Tyagi, N.-H. Tai, I.N. Lin, *"Role of transfer layer on tribological properties of nanocrystalline diamond nanowire film sliding against alumina allotropes,"* Diamond and Related Materials, 48, 6 (2014) (Peer reviewed).
Impact factor: 1.709.
35. Marie Jakl Krecmarová, Václav Petrák, Andrew Taylor, Kamatchi Jothiramalingam Sankaran, I-Nan Lin, Aleš Jäger, Viera Gärtnerová, Ladislav Fekete, Jan Drahokoupil, František Laufek, Jirí Vacík, Pavel Hubík, Vincent Mortet, and Miloš Nesládek, *"Change of diamond film structure and morphology with N_2 addition in MW PECVD apparatus with linear antenna delivery system,"* Phys. Status Solidi A, 211, 2296 (2014) (Peer reviewed).
Impact factor: 1.469.
36. Kamatchi Jothiramalingam Sankaran, Srinivasu Kunuku, Keh-Chyang Leou, Nyan-Hwa Tai, and I-Nan Lin, *"Enhancement of the Electron Field Emission Properties of Ultrananocrystalline Diamond Films via Hydrogen Post-Treatment,"* ACS Applied Materials and Interfaces, 6, 14543 (2014) (Peer reviewed).
Impact factor: 5.900.
37. Joji Kurian, Kamatchi Jothiramalingam Sankaran, Joseph P. Thomas, N. H. Tai, Huang-Chin

Chen1 and I-Nan Lin, *"The role of nanographitic phase on enhancing the electron field emission properties of hybrid granular structured diamond films-the electron energy loss spectroscopic studies,"* Journal of Physics D: Applied Physics, 47, 415303 (2014) (Peer reviewed).
Impact factor: 2.521.

38. Joji Kurian, Kamatchi Jothiramalingam Sankaran, and I-Nan Lin, *"On the role of graphite in ultrananocrystalline diamond films used for electron field emitter applications,"* physica status solidi (a), 211, 2223 (2014) (feature article).
Impact factor: 1.469.
39. Srinivasu Kunuku, Kamatchi Jothiramalingam Sankaran, Chungli Dong, Nyan-Hwa Tai, Keh-Chyang Leou, and I-Nan Lin, *"Development of long lifetime cathode materials for microplasma application,"* RSC Advances, 4, 47865 (2014) (Peer reviewed).
Impact factor: 3.708.
40. Kalpataru Panda, Kamatchi J. Sankaran, Eiichi Inami, Yoshiaki Sugimoto, Nyan Hwa Tai, I-Nan Lin, *"Direct observation and mechanism for enhanced field emission sites in platinum ion implanted/post-annealed ultrananocrystalline diamond films,"* Applied Physics Letters, 105, 163109 (2014) (Peer reviewed).
Impact factor: 3.794.
41. K. J. Sankaran, B. R. Huang, A. Saravanan, N. H. Tai, and I. N. Lin, *"Origin of graphitic filaments on improving the electron field emission properties of negative bias-enhanced grown ultrananocrystalline diamond films in CH_4/Ar plasma,"* Journal of Applied Physics, 116, 163102 (2014) (Peer reviewed).
Impact factor: 2.185.
42. Kamatchi Jothiramalingam Sankaran, Kalpataru Panda, Sundaravel Balakrishnan, Nyan-Hwa Tai, and I-Nan Lin, *"Catalytically induce nanographite phase by platinum-ion implantation/annealing process to improve the field electron emission properties of ultrananocrystalline diamond films,"* Journal of Materials Chemistry C, 3, 2632 (2015) (Peer reviewed).
Impact factor: 6.626.
43. Kamatchi Jothiramalingam Sankaran, Srinivasu Kunuku, Sundaravel Balakrishnan, Ping-Yen Hsieh, Huang-Chin Chen, Keh-Chyang Leou, Nyan-Hwa Tai, and I-Nan Lin, *"Gold nanoparticles-ultrananocrystalline diamond hybrid structured materials for high-performance optoelectronic device applications,"* Nanoscale, 7, 4377 (2015) (Peer reviewed).
Impact factor: 6.739.
44. K. J. Sankaran, N. H. Tai, and I. N. Lin, *"Microstructural evolution of diamond films from $CH_4/H_2/N_2$ plasma and their enhanced electrical properties,"* Journal of Applied Physics,

117, 075303 (2015) (Peer reviewed).
Impact factor: 2.185.

45. A. Saravanan, B. R. Huang, K. J. Sankaran, C. L. Dong, N. H. Tai, and I. N. Lin, *"Bias-enhanced post-treatment process for enhancing the electron field emission properties of ultrananocrystalline diamond films,"* Applied Physics Letters, 106, 111602 (2015) (Peer reviewed).
Impact factor: 3.794.
46. A. Saravanan, B. R. Huang, K. J. Sankaran, Gerd Keiser, Joji Kurian, N. H. Tai, and I. N. Lin, *"Structural modification of nanocrystalline diamond films via positive/negative bias enhanced nucleation and growth processes for improving their electron field emission properties,"* Journal of Applied Physics, 117, 215307 (2015) (Peer reviewed).
Impact factor: 2.185.
47. Adhimoorthy Saravanan, Bohr-Ran Huang, Kamatchi Jothiramalingam Sankaran, Nyan-Hwa Tai, and I-Nan Lin, *"Highly Conductive Diamond−Graphite Nanohybrid Films with Enhanced Electron Field Emission and Microplasma Illumination Properties,"* ACS Applied Materials and Interfaces, 7, 14035 (2015) (Peer reviewed).
Impact factor: 6.723.
48. K. J. Sankaran, B. Sundaravel, N. H. Tai, and I. N. Lin, *"Improvement on electrical conductivity and electron field emission properties of Au-ion implanted ultrananocrystalline diamond films by using Au-Si eutectic substrates,"* Journal of Applied Physics, 118, 085306 (2015) (Peer reviewed).
Impact factor: 2.185.
49. Revati Rani, N. Kumar, A.T. Kozakov, K. A. Googlev, K.J. Sankaran, Pankaj Kr. Das, S. Dash, A.K. Tyagi, I.N. Lin, *"Superlubrication properties of ultrananocrystalline diamond film sliding against the zirconia ball,"* RSC Advances, 5(122), 100663 (2015) (Peer reviewed).
Impact factor: 3.84.
50. Kamatchi Jothiramalingam Sankaran, Bohr-Ran Huang, Adhimoorthy Saravanan, Divinah Manoharan, Nyan-Hwa Tai, and I-Nan Lin, *"Heterogranular-Structured Diamond−Gold Nanohybrids: A New Long-Life Electronic Display Cathode",* ACS Applied Materials and Interfaces, 7, 27078 (2015) (Peer reviewed).
Impact factor: 6.723.
51. Kamatchi Jothiramalingam Sankaran, Bohr-Ran Huang, Adhimoorthy Saravanan, Divinah Manoharan, Nyan-Hwa Tai, and I-Nan Lin, *"Nitrogen Incorporated Ultrananocrystalline Diamond Microstructures from Bias-enhanced Microwave N2/CH4-Plasma Chemical Vapor Deposition",* Plasma Processes and Polymers, 13, 419 (2016) (Peer reviewed).
Impact factor: 2.453.

52. Mateusz Ficek, Kamatchi J. Sankaran, Jacek Ryl, Robert Bogdanowicz, I-Nan Lin, Ken Haenen, and Kazimierz Darowicki, "*Ellipsometric investigation of nitrogen doped diamond thin films grown in microwave $CH_4/H_2/N_2$ plasma enhanced chemical vapor deposition*", Applied Physics Letters, 108, 241906 (2016) (Peer reviewed).
Impact factor: 3.142.
53. Kamatchi Jothiramalingam Sankaran, Ting-Hsun Chang, Santosh Kumar Bikkarolla, Susanta Sinha Roy, Pagona Papakonstantinou, Sien Drijkoningen, Paulius Pobedinskas, Marlies Van Bael, Nyan-Hwa Tai, I-Nan Lin and Ken Haenen, "*Growth, structural and plasma illumination properties of nanocrystalline diamond decorated graphene nanoflakes*" RSC Advances, 6, 63178 (2016) (Peer reviewed).
Impact factor: 3.289.
54. Kamatchi Jothiramalingam Sankaran, Hoang Duc Quang, Srinivasu Kunuku, Svetlana Korneychuk, Stuart Turner, Paulius Pobedinskas, Sien Drijkoningen, Marlies Van Bael, Jan D'Haen, Johan Verbeeck, Keh-Chyang Leou, I-Nan Lin and Ken Haenen, "*Enhanced optoelectronic performances of vertically aligned hexagonal boron nitride nanowalls-nanocrystalline diamond heterostructures*" Scientific Reports, 6, 29444 (2016) (Peer reviewed).
Impact factor: 5.228.
55. K. J. Sankaran, D. Manoharan, B. Sundaravel, and I. N. Lin, "*Multienergy gold ion implantation for enhancing the field electron emission characteristics of heterogranular structured diamond films grown on Au-coated Si substrates*" Applied Physics Letters, 109, 101603 (2016) (Peer reviewed).
Impact factor: 3.142.
56. Kamatchi Jothiramalingam Sankaran, Duc Quang Hoang, Svetlana Korneychuk, Srinivasu Kunuku, Joseph Palathinkal Thomas, Paulius Pobedinskas, Sien Drijkoningen, Marlies K. Van Bael, Jan D'Haen, Johan Verbeeck, Keh-Chyang Leou, Kam Tong Leung, I-Nan Lin, and Ken Haenen, "*Hierarchical hexagonal boron nitride nanowall–diamond nanorod heterostructures with enhanced optoelectronic performance*" RSC Advances, 6, 90338 (2016) (Peer reviewed).
Impact factor: 3.289.
57. K. J. Sankaran, D. Q. Hoang, K. Srinivasu, S. Korneychuk, S. Turner, S. Drijkoningen, P. Pobedinskas, J. Verbeeck, K. C. Leou, I. N. Lin and K. Haenen, "*Engineering the interface characteristics on the enhancement of field electron emission properties of vertically aligned hexagonal boron nitride nanowalls*" physica status solidi (a) 10, 2654 (2016) (Peer reviewed).
Impact factor: 1.648.

58. Kalpataru Panda, Eiichi Inami, Yoshiaki Sugimoto, K. J. Sankaran and I-Nan Lin, "*Straight Imaging and Mechanism behind Grain Boundary Electron Emission in Pt-doped Ultrananocrystalline Diamond Films*" Carbon, 111, 8 (2017) (Peer reviewed).
Impact factor: 6.198.
59. Kamatchi Jothiramalingam Sankaran, Chien-Jui Yeh, Sien Drijkoningen, Paulius Pobedinskas, Marlies K. Van Bael, Keh-Chyang Leou, I-Nan Lin and Ken Haenen, "*Enhancement of plasma illumination characteristics of few-layer graphene–diamond nanorods hybrid*" Nanotechnology, 28, 065701 (2017) (Peer reviewed).
Impact factor: 3.573
60. Duc-Quang Hoang, Svetlana Korneychuk, Kamatchi Jothiramalingam Sankaran, Paulius Pobedinskas, Sien Drijkoningen, Stuart Turner, Marlies K. Van Bael, Johan Verbeeck, Shannon S. Nicley, Ken Haenen, "*Direct nucleation of hexagonal boron nitride on diamond: Crystalline properties of hBN nanowalls*" Acta Materialia, 127, 17 (2017) (Peer reviewed).
Impact factor: 5.058
61. Srinivasu Kunuku, Kamatchi Jothiramalingam Sankaran, Keh-Chyang Leou and I-Nan Lin, "*Microplasma device architectures with various diamond nanostructures*" Materials Research Express, 4, 025001 (2017) (Peer reviewed).
Impact factor: 0.968
62. K. J. Sankaran, K. Srinivasu, C. J. Yeh, J. P. Thomas, S. Drijkoningen, P. Pobedinskas, B. Sundaravel, K. C. Leou, K. T. Leung, M. K. Van Bael, M. Schreck, I. N. Lin, K. Haenen, "*Field electron emission enhancement in lithium implanted and annealed nitrogen-incorporated nanocrystalline diamond films*" Applied Physics Letters 110, 261602 (2017) (Peer reviewed).
Impact factor: 3.411.
63. R. Ramaneti, K. J. Sankaran, S. Korneychuk, C. J. Yeh, G. Degutis, K. C. Leou, J. Verbeeck, M. K. Van Bael, I. N. Lin, K. Haenen, "*Vertically aligned diamond-graphite hybrid nanorod arrays with superior field electron emission properties*" APL Materials 5, 066102 (2017) (Peer reviewed) (R. Ramaneti and K. J. Sankaran contributed equally to this work).
Impact factor: 4.323.
64. G. Bhattacharya, K. J. Sankaran, S. B. Srivastava, J. P. Thomas, S. Deshmukh, P. Pobedinskas, S. P. Singh, K. T. Leung, M. K. Van Bael, K. Haenen, S. S. Roy, "*Probing the flat band potential and effective electronic carrier density in vertically aligned nitrogen doped diamond nanorods via electrochemical method*" Electrochimica Acta 246, 68 (2017) (Peer reviewed).
Impact factor: 4.803.

65. Kalpataru Panda, Jeong Jin Hyeok, Jeong Young Park, Kamatchi Jothiramalingam Sankaran, Sundaravel Balakrishnan and I.-Nan Lin, "*Nanoscale investigation of enhanced electron field emission for silver ion implanted/postannealed ultrananocrystalline diamond films*", Scientific Reports, 7, 16325 (2017) (Peer reviewed).
Impact factor: 5.228.
66. K. K. Mishra, Revati Rani, N. Kumar, T. R. Ravindran, K. J. Sankaran, I-Nan Lin, "*High pressure Raman spectroscopic studies on ultrananocrystalline diamond thin films: Anharmonicity and thermal properties of the grain boundary*", Diamond and Related Materials 80, 45 (2017) (Peer reviewed).
Impact factor: 2.561.
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1. Ting-Hsun Chang, Shiu-Cheng Lou, Nyan-Hwa Tai, Kamatchi Jothiramalingam Sankaran, Chulung Chen, and I-Nan Lin, *"Fabrication of nitrogen-doped ultrananocrystalline diamond nanowire arrays with enhanced field emission and plasma illumination performance,"* 9–13 July, 2012, Vacuum Nanoelectronics Conference (IVNC), 2012 25th International, Jeju, South Korea.
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2. Joji Kurian, Kamatchi Jothiramalingam Sankaran, Nyan-Hwa Tai, and I-Nan Lin, *"Selective area growth of highly resistive ultrananocrystalline diamond films using copper patterned silicon substrates,"* First National Conference on Advanced Nanomaterials- CAN 2015, 1 and 2, October, 2015 , Department of Physics, Nirmalagiri College, Kannur, Kerala, India.
3. M. Kosowska, D. Majchrowicz, K. J. Sankaran, M. Ficek, M. J. Szczerska and K. Haenen, "*Nitrogen-doped diamond thin films: potential application in Fabry-Pérot interferometer*", Proc. SPIE 10716, Saratov Fall Meeting 2017: Optical Technologies in Biophysics and Medicine XIX (Peer reviewed).

CONFERENCES AND SEMINARS PRESENTED/PARTICIPATED

1. Participated in the One-day Inter-collegiate Seminar on Solid State Physics, 19 October, 2002, Devanga Arts College, Aruppukottai, Tamil Nadu, India.
2. Participated in the One-day Inter-collegiate meet "NOVA '05", 25 January 2005, Saiva Bhanu Kshatriya College, Aruppukottai, Tamil Nadu, India.
3. Participated in the International Workshop on Nanoscience and Technology, 13–17, February 2006, Department of Physics, College of Engineering, Anna University, Chennai, India.
4. Presented the paper *"Growth and characterization of Boric acid doped potassium dihydrogen phosphate crystals for non-linear optics applications,"* Second National Symposium on Nonlinear Optical Crystals and Modelling in Crystal Growth, 26–27 March, 2007, Department of Physics, College of Engineering, Anna University, Chennai, India (*Oral presentation*).
5. Participated in the Fourteenth National Congress on Corrosion Control, 18–20 September, 2008, Hotel Green Park, Hyderabad, India.
6. K. J. Sankaran, P. T. Joseph, H. C. Chen, N. H. Tai, and I. N. Lin, *"Investigation in the role of hydrogen on the growth and properties of diamond films using $CH_4/Ar/H_2$ microwave plasma,"* NDNC 2010, 16–20 May 2010, Suzhou, China (*Poster presentation*).

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13. Ting-Hsun Chang, Shiu-Cheng Lou, Nyan-Hwa Tai, Kamatchi Jothiramalingam Sankaran, Chulung Chen, and I-Nan Lin, *"Fabrication of nitrogen-doped ultrananocrystalline diamond nanowire arrays with enhanced field emission and plasma illumination performance,"* Vacuum Nanoelectronics Conference (IVNC), 2012 25th International, 9–13 July, 2012, Jeju, South Korea (*Poster presentation*).
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16. K. J. Sankaran, M. Afsal, S. C. Lou, H. C. Chen, C. Chen, C. Y. Lee, L. J. Chen, N. H. Tai, and I. N. Lin, *"Electron field emission enhancement of ultrananocrystalline diamond/ ZnO thin film heterojunction,"* New Diamond and Nano Carbons 2013, 19–23 May 2013, Novotel Clarke Quay, Singapore (*Poster presentation*).
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18. K. J. Sankaran, H. C. Chen, B. Sundaravel, C. Y. Lee, N. H. Tai, and I. N. Lin, *"Mechanism of electron field emission enhancement for ultrananocrystalline diamond films due to ion implantation,"* 31st Symposium on Spectroscopic Technologies and Surface Sciences, 23–25 July 2013, Taiwan (*Oral presentation*).
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20. Shalini Jayakumar, Kamatchi Jothiramalingam Sankaran, Chi-Young Lee, Nyan-Hwa Tai, and I-Nan Lin, *"Simultaneous Detection of Toxic Metal Ion Using Samarium Hexacyanoferrate Nanoparticles Modified Diamond Nanowires Electrode as an Electro-Chemical Sensor",* 2013 MRS Fall Meeting & Exhibit, 1–6, December 2013, Boston, Massachusetts (*Poster presentation*).
20. A. Saravanan, K. Srinivasu, K. J. Sankaran, N. H. Tai, K. C. Leou, B.R Huang and I. N. Lin, *"Growth of Ultrananocrystalline Diamond films by Bias Enhanced Growth in the Microwave Plasma Enhanced Chemical Vapor Deposition System",* 8th Asia-Pacific International Symposium on the Basics and Applications of Plasma Technology 2013, 20–22, December 2013, Hsinchu, Taiwan (*Poster presentation*).
21. K. Srinivasu, K. J. Sankaran, N. H. Tai, K. C. Leou, and I. N. Lin, *"Plasma for Growth, Processing of Diamond films and Diamond Nanostructures for Microplasma Applications",* 8th Asia-Pacific International Symposium on the Basics and Applications of Plasma Technology 2013, 20–22, December 2013, Hsinchu, Taiwan (*Oral presentation*).
22. K. Srinivasu, K. J. Sankaran, C. L Dong, N. H. Tai, K. C. Leou and I. N. Lin, *"Diamond films with different granular structures grown on Au coated Si for application of micro discharges and their characteristics",* TACT 2014 International Students Symposium on Thin Films and Coatings, 29 March 2014, Tainan, Taiwan (*Oral Presentation Award 3rd Winner*).
23. K. J. Sankaran, H. C. Chen, K. Panda, B. Sundaravel, C. Y. Lee, N. H. Tai, and I. N. Lin, *"Enhanced Electron Field Emission Properties of Conducting Ultrananocrystalline Diamond Films after Cu and Au Ion Implantations"*, TACT 2014 International Students Symposium on Thin Films and Coatings, 29 March 2014, Tainan, Taiwan (*Oral Presentation Award 1st Winner*).
24. K. Panda, Eiichi Inami, K. J Sankaran, Yoshiaki Sugimoto, Nyan-Hwa Tai, I-Nan Lin,

"Combined STM and AFM study on the mechanism for enhanced electron emission in Pt ion implanted UNCD films" 17th International Conference on non-contact Atomic Force Microscopy, 4–8 August 2014, Tsukuba, Japan (*Poster presentation*).

25. M. Jakl Krečmarová, V. Petrák, A. Taylor, L. Fekete, K. J. Sankaran, I-Nan Lin, V. Gärtnerová, A. Jäger, J. Drahokoupil, V. Mortet and M. Nesládek, *"Linear antenna microwave plasma CVD diamond deposition: effect of nitrogen addition into the gas phase,"* International Conference on Diamond and Carbon Materials, 7–11 September, 2014, Madrid, Spain (*Poster presentation*).
26. Adhimoorthy Saravanan, Bohr-Ran Huang, Kamatchi Jothiramalingam Sankaran, Srinivasu Kunuku, Chung-Li Dong, Keh-Chyang Leou, Nyan-Hwa Tai, and I-Nan Lin, *"Investigation on the bias-enhanced nucleation and growth processes of ultrananocrystalline diamond films (UNCD) and their enhanced electron field emission and plasma illumination properties,"* 7th Vacuum and Surface Sciences Conference of Asia and Australia, 5–9 October 2014, Hsinchu Taiwan (*Oral Presentation*).
27. K. J. Sankaran, B. Sundaravel, P. Y. Hsieh, N. H. Tai, I. N. Lin, *"The improvement of electrical conductivity and electron field emission properties of Au-ion implanted ultrananocrystalline diamond films by using Au-Si eutectic substrates,"* 7th Vacuum and Surface Sciences Conference of Asia and Australia, 5–9 October 2014, Hsinchu Taiwan (*Oral Presentation*).
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31. K. J. Sankaran, B. Sundaravel, N. H. Tai, K. Haenen, I. N. Lin, *"Gold nanoparticles-ultrananocrystalline diamond hybrid structured materials for high-performance electronic device applications,"* Hasselt Diamond Workshop 2015-SBDD XX, 20–22, February 2015, Hasselt, Belgium (*Poster presentation*).
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applications," Hasselt Diamond Workshop 2015-SBDD XX, 20–22 February 2015, Hasselt, Belgium (*Poster presentation*).

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35. K. Panda, E. Inami, K. J Sankaran, Y. Sugimoto, I. N. Lin, *"Energy Dissipation of Tunneling Electrons as a Tool to Directly Detect Electron Emission Sites in Doped Ultrananocrystalline Diamond Films",* NIMS Conference 2015 Materials Innovation Driven by Advanced Characterization, 14–16 July 2015, Tsukuba International Conference Center, Epochal, Tsukuba, Japan (*Poster presentation*).
36. K. J. Sankaran, D.-Q. Hoang, K. Srinivasu, S. Korneychuk, S. Turner, P. Pobedinskas, S. Drijkoningen, J. Verbeeck, J. D'Haen, K. C. Leou, I. N. Lin, K. Haenen, "*Electron Field Emission Enhancement of Hexagonal Boron Nitride (hBN)-Nanocrystalline Diamond (NCD) Heterostructures"*, International Conference on Diamond and Carbon Materials, 6–10 September, 2015, Bad Homburg, Germany (*Oral presentation*).
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39. D. -Q. Hoang, P. Pobedinskas, K. J. Sankaran, S. D. Janssens, S. Turner, A. Hardy, J. Verbeeck, M.K. Van Bael, J. D'Haen, and K. Haenen *"RF deposited hexagonal boron nitride material and its applications,"* Inter University Symposium, The Belgo-Vietnamese Rector's Mission 2015, 19 October, 2015 , Het Pand, Ghent, Belgium (*Poster presentation*).
40. K. J Sankaran, I. N. Lin and K. Haenen *"Nanocrystalline Diamond Decorated Graphene Nanoflakes: Growth, Structural and Plasma Illumination Properties"*, II International Conference on Recent Trends in Materials, 22 and 23 January 2016, Devanga Arts College, Aruppukottai, Tamilnadu, India (*Poster presentation*).

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43. D. Q. Hoang, K. J. Sankaran, S. Korneychuk, P. Pobedinskas, S. Drijkoningen, S. Turner, S. S. Nicley, J. Verbeeck, M. K. Van Bael, J. D'Haen and K. Haenen, *"Direct observation of hBN crystallinity changes at the interface of hBN nanowalls and nanocrystalline CVD diamond"*, Hasselt Diamond Workshop 2015-SBDD XXI, 9–11 March 2016, Hasselt, Belgium (*Poster presentation*).
44. M. Ficek, K. J. Sankaran, J. Ryl, R. Bogdanowicz, I. N. Lin, K. Haenen and K. Darowicki *"Optical properties and molecular composition of nitrogen doped diamond thin films grown in microwave $CH_4/H_2/N_2$ plasma enhanced chemical vapor deposition"* , Hasselt Diamond Workshop 2015-SBDD XXI, 9–11 March 2016, Hasselt, Belgium (*Poster presentation*).
45. K. J. Sankaran, D.-Q. Hoang, K. Srinivasu, S. Korneychuk, S. Turner, P. Pobedinskas, S. Drijkoningen, J. Verbeeck, J. D'Haen, K. C. Leou, I. N. Lin and K. Haenen, *"Understanding Interface Characteristics of Hexagonal Boron Nitride-Diamond Heterostructures paves way for High Performance Opto-electronic Device Applications"*, 2016 E-MRS Spring meeting, 2–6 May 2016, Lille, France (*Oral presentation*).
46. K. J. Sankaran, D.-Q. Hoang, K. Srinivasu, S. Korneychuk, S. Turner, P. Pobedinskas, S. Drijkoningen, J. Verbeeck, J. D'Haen, K. C. Leou, I. N. Lin and K. Haenen, *"High Performance Field Emission Electron Sources from Hexagonal Boron Nitride-Diamond Heterostructures"*, 2016 E-MRS Spring meeting, 2–6 May 2016, Lille, France (*Oral presentation*).
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Conference on Diamond and Carbon Materials, 4–8 September, 2016, Montpellier, France (*Poster presentation*).

49. K. J Sankaran, *"Development of diamond-based hybrid materials for electron field emitters and microplasma cathode application"*, Global Congress and Expo on Materials Science and Nanoscience, 24–26 October 2016, Dubai, UAE (*Invited Talk*).
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51. K. J. Sankaran, M. Ficek, C. J. Yeh, K. Srinivasu, R. Bogdanowicz, K. C. Leou, I. N. Lin and K. Haenen, "*Structural and electrical properties of boron doped diamond nanowalls*", Hasselt Diamond Workshop-SBDD XXII, 8–10 March 2017, Hasselt, Belgium (Poster presentation).
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54. K. J. Sankaran, R. Ramaneti, S. Korneychuk, C. J. Yeh, G. Degutis, K. C. Leou, J. Verbeeck, M. K. Van Bael, I. N. Lin and K. Haenen, "*Vertically aligned patterned diamond-graphite hybrid nanorod arrays with superior field electron emission properties*", New Diamond and Nano Carbons, 28 May–1 June 2017, Cairns, Australia (Poster presentation).
55. K. J. Sankaran, "*Nanodiamond based hybrid materials for field electron emission applications*", 22 June 2017, Gdansk University of Technology, Gdansk, Poland (*Guest Lecture*).
56. K. J. Sankaran, "*Nanodiamond based hybrid materials for field electron emission applications*", Smart Engineering of New Materials, 26–30 June 2017, Lodz, Poland (*Invited Talk*).
57. K. J. Sankaran, S. Korneychuk, R. Ramaneti, S. Drijkoningen, K. Srinivasu, P. Pobedinskas, J. Verbeeck, M. K. Van Bael, I. N. Lin and K. Haenen, "*Vertically Aligned Diamond-Graphite Hybrid Nanorods for Thermionic and Field Electron Emission*

Applications", International Conference on Diamond and Carbon Materials 3–7 September 2017, Gothenburg, Sweden (Oral presentation).

58. K. J. Sankaran, S. Korneychuk, S. Deshmukh, K. Srinivasu, S. Drijkoningen, P. Pobedinskas, G. Bhattacharya, J. Verbeeck, M. K. Van Bael, S. S. Roy, I. N. Lin and K. Haenen, "*Fabrication, Microstructure and Advanced Electron Emission Applications of Vertically Aligned Nitrogen-doped Nanocrystalline Diamond Nanorods*", MRS Fall Meeting and Exhibit 26 November–1 December 2017, Boston, Massachusetts, USA (Oral presentation).
59. K. J. Sankaran, M. Ficek, C. J. Yeh, K. Srinivasu, K. Panda, J. Y. Park, R. Bogdanowicz, K. C. Leou, I. N. Lin and K. Haenen, "*Self-organized Multilayered Graphene-Boron Doped Diamond Hybrid Nanowalls for High Performance Field Electron Emission Devices*", MRS Fall Meeting and Exhibit 26 November–1 December 2017, Boston, Massachusetts, USA (Oral presentation).
60. K. J. Sankaran, K. Srinivasu, C. J. Yeh, P. Pobedinskas, M. Schreck, I. N. Lin and K. Haenen, "*Field electron emission enhancement of nanocrystalline diamond films by lithium ion implantation and annealing*", MRS Fall Meeting and Exhibit 26 November-1 December 2017, Boston, Massachusetts, USA (Oral presentation).
61. Rajesh Ramaneti, Svetlana Korneychuk, Yan Zhou, Giedrius Degutis, K J Sankaran, Sien Drijkoningen, Paulius Pobedinskas, Joff Derluyn, Johan Verbeeck, Martin Kuball, Marlies van Bael, Ken Haenen, "*Diamond integration onto CMOS technology – from chemistry and interfacing to selective area growth and device applications*", LGBT STEMINAR 2018, 12th January 2018, National STEM Learning Centre, University of York, York, UK.
62. S. Deshmukh, K. J. Sankaran, D. Banerjee, K. Haenen and S. S. Roy, "*Probing of Enhanced Electron Emission Sites in N Doped Diamond Nanorods*", International Conference on Current Trends in Materials Science and Engineering, 19 and 20 January 2018, S. N. Bose National Center for Basic Sciences, Kolkata, India (Best Oral Presentation Award).
63. K. J. Sankaran, M. Ficek, C. J. Yeh, K. Srinivasu, K. Panda, J. Y. Park, R. Bogdanowicz, K. C. Leou, I. N. Lin and K. Haenen, "*High performance electron emission from cactus-like diamond nanostructures*", Hasselt Diamond Workshop-SBDD XXIII, 7–9 March 2018, Hasselt, Belgium (Poster presentation).
64. Daria Majchrowicz, Monika Kosowska, Kamatchi J. Sankaran, Przemysław Struk, Michał Wąsowicz, Michał Sobaszek, Ken Haenen, Małgorzata Jędrzejewska-Szczerska "*Nitrogen-doped diamond film for optical investigation of hemoglobin concentration*", Hasselt Diamond Workshop-SBDD XXIII, 7-9 March 2018, Hasselt, Belgium (Poster presentation).
65. Rajesh Ramaneti, K. J. Sankaran, Giedrius Degutis, Yan Zhou, Svetlana Korneychuk, Paulius Pobedinskas, Joff Derluyn, Johan Verbeeck, K. C. Leou, I. N. Lin, Martin Kuball,

Ken Haenen, "*Diamond in 'Beyond CMOS' technologies: From Surface Chemistry, Thermal Interface Studies to Chip-based Raman Spectroscopy and Micro/nano Patterned Field Emission Devices*", Hasselt Diamond Workshop-SBDD XXIII, 7–9 March 2018, Hasselt, Belgium (Poster presentation).

66. S. Deshmukh, K. J. Sankaran, S. Korneychuk, J. Verbeeck, K. Haenen, S. S. Roy, "*Nanomolar level detection of Cd^{2+} and Pb^{2+} ions using N-doped diamond nanostructures*", Hasselt Diamond Workshop-SBDD XXIII, 7–9 March 2018, Hasselt, Belgium (Oral presentation).
67. K. J. Sankaran, K. Panda, B. Sundaravel, I. N. Lin, K. Haenen, "*Local probing of the enhanced field electron emission of gold-diamond nanohybrids*", 12th International New Diamond and Nano Carbons Conference (NDNC 2018), May 20-24, 2018, Flagstaff, Arizona (Oral presentation).
68. Sankaran Kamatchi Jothiramalingam, Mateusz Ficek, Chien-Jui Yeh, Robert Bogdanowicz, Key-Chyang Leou, I-Nan Lin, Ken Haenen, "*High Performance electron emission devices from self-organized multilayer graphene-diamond hybrid nanospines*", XXVII International Materials Research Congress 2018, August 19–24, 2018, Cancun, Mexico (Oral presentation).
69. Sankaran Kamatchi Jothiramalingam, Chien-Jui Yeh, Ping-Yen Hsieh, Paulius Pobedinskas, Key-Chyang Leou, Marlies K. Van Bael, Nyan-Hwa Tai, I-Nan Lin, Ken Haenen, "*Tailoring the microstructure towards conductive nanocrystalline diamond films for enhanced field electron emission characteristics*", XXVII International Materials Research Congress 2018, August 19–24, 2018, Cancun, Mexico (Oral presentation).
70. Sankaran Kamatchi Jothiramalingam, Kalpataru Panda, Balakrishnan Sundaravel, I-Nan Lin, Ken Haenen, "*Nanoscale investigation of enhanced field electron emission for gold-diamond nanohybrids*", XXVII International Materials Research Congress 2018, August 19–24, 2018, Cancun, Mexico (Oral presentation).
71. K. J. Sankaran, K. Haenen, "*Nitrogen Incorporated (Ultra)Nanocrystalline Diamond Films for Field Electron Emission Applications*", 2nd edition of International Conference on Recent Trends in Materials Science and Technology-ICMST 2018, October 10–13, 2018, Thiruvananthapuram, India (*Invited talk*).
72. K. J. Sankaran, "*Ultrananocrystalline Diamond Hybrids For Electron Emission Applications*", 4 October 2018, Shiv Nadar University, India (*Guest Lecture*).

EXECUTIVE SUMMARY

- Thin Films deposition using: Microwave Plasma Enhanced Chemical Vapor Deposition (MPECVD) IPLAS and ASTeX systems, Linear Antenna Microwave Plasma CVD system for Low Temperature Grown Diamond Films,

- RF Sputtering.
- Lithography (UV).
- Electron Field Emission and Thermionic Electron Emission Measurements.
- Microplasma Illuminations Measurements.
- Reactive Ion Etching.
- Familiar with polishing, and ion milling techniques.

HANDS-ON EXPERIENCE

- Transmission Electron Microscopy (JEOL 2100).
- Field Emission Scanning Electron Microscopy (JEOL 6500).
- Atomic Force Microscopy.
- Raman Spectroscopy.
- X-ray Diffraction.
- Fourier transform infrared spectroscopy.
- Electrochemical (AUTOLAB) measurements.
- Hall and Four-point probe resistivity measurements.

EXTRA CURRICULAR ACTIVITIES

- Vice-President of Foreign Students Association (FSA), National Tsing Hua University, Taiwan (2010–2011).
- Acting drama, writing poems, singing songs.

PERSONAL DETAILS

Gender	Male
Date of Birth	December 1, 1984
Nationality	India
Marital status	Married
Linguistic Proficiency	Tamil, English, Hindi, Kannada, Mandarin Chinese.

REFEREES

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