

PUBLICATIONS OF PROF. RAKESH VAID

List of Publications during January 01, 2018 upto December 31, 2023

1. Deepak Anand, Ashish Singh Sambyal and Rakesh Vaid, Performance Evaluation of Triboelectric Nanogenerator (TENG) Using Different Triboelectric Materials and Substrates for Energy Harvesting”, ECS Journal of Solid State Science and Technology, Vol 13, 093012, 2024., **Impact factor: 1.8.**
2. Ashish Singh Sambyal, Deepak Anand, **Rakesh Vaid**, Nandu B Chaure. Synthesis and characterization of power efficient triboelectric nanogenerator based on contact-separation mode using spray pyrolysis” Journal of Materials Science: Materials in Electronics, Vol **34**, 1458 (2023). <https://doi.org/10.1007/s10854-023-10891-z> **Impact factor: 2.8** (Springer US).
3. Deepak Anand, Ashish Singh Sambyal, **Rakesh Vaid** "A critical review on the material aspects of triboelectric nanogenerators (TENG)" Facta Universitatis, Series: **Electronics and Energetics** Vol. 36, No 3, September 2023, pp. 411-426 <https://doi.org/10.2298/FUEE2303411A> **Impact Factor: 0.6**
4. Deepak Anand, Ashish Singh Sambyal, **Rakesh Vaid**, Nandu B Chaure, –Structural and electrical characterization of gold nanoparticles-based flexible triboelectric nanogenerator| Journal of Materials Science: Materials in Electronics, Vol. **34**, no. 4, pp. 266 Jan 2023, doi: <https://doi.org/10.1007/s10854-022-09715-3> **Impact factor: 2.8** (Springer US).
5. Richa Gupta, Arighna Basak, **Rakesh Vaid**, Papiya Debnath, Manash Chanda, Hafizur Rahman, –Application of nanoscale devices in circuits: Nanoelectronics: Physics, Materials and Devices, pp. 359-384, Jan 2023 <https://doi.org/10.1016/B978-0-323-91832-9.00017-8> (Elsevier)
6. **Rakesh Vaid**, Richa Gupta, Devi Dass, Vijay K Arora, –Physical properties of carbon nanotubes and nanoribbons: Graphene, Nanotubes and Quantum Dots-Based Nanotechnology” pp. 305-332, July 2022 <https://doi.org/10.1016/B978-0-323-85457-3.00036-0> (Woodhead Publishing)
7. Ashish Singh Sambyal, Deepak Anand, **Rakesh Vaid**, Dulen Saikia, Nandu B Chaure, and Ajit Khosla, –Synthesis and Characterization of a Transparent PMMA Based Triboelectric Nanogenerator for Wearable Electronic Applications| [ECS Meeting Abstracts, Volume MA2022-01, Z04: 1D/2D/3D/4D Materials and Systems + Soft Robotics \(4D|MS+SoRo\)](#)
8. Deepak Anand, Ashish Singh Sambyal, **Rakesh Vaid**, and Ajit Khosla, –Fabrication of a Low Cost Triboelectric Nanogenerator (TENG) for Wearable Devices| [ECS Meeting Abstracts, Volume MA2022-01, Z04: 1D/2D/3D/4D Materials and Systems + Soft Robotics \(4D|MS+SoRo\)](#)
9. Deepika Jamwal, Nandu B Chaure, **Rakesh Vaid**, –Amorphous ZrOx anti-reflective coating for improved performance of silicon solar cell devices| Journal of Materials Science: Materials in Electronics, Vol. **32**, no. 14, pp. 19579–19593 July 2021, doi: <https://doi.org/10.1007/s10854-021-06478-1> **Impact factor: 2.8.**
10. Deepak Anand, Ashish Singh Sambyal, **Rakesh Vaid**, –Triboelectric Nanogenerators (TENG): Factors affecting its efficiency and applications| Facta Universitatis, Series: Electronics and Energetics, Vol. 34, issue 2, pp. 157-172, 2021. <https://doi.org/10.2298/FUEE2102157A> **Impact Factor: 0.6**
11. Richa Gupta and **Rakesh Vaid**, "Structural and Electrical Characteristics of ALD- TiO₂/SiON/n-Si Gate-Stack for Advanced CMOS Device Applications," in *IEEE Transactions on Electron Devices*, vol. 68, no. 6, pp. 2625-2632, June 2021, doi: <https://doi.org/10.1109/TED.2021.3075394> **Impact factor: 3.1**
12. **Rakesh Vaid** and Renu Rajput, –Impact of post-annealing of tunnel oxide on the electrical characteristics of Pt–Ti/HfO₂/TiN/SiON/n-Si capacitor for flash memory applications| Journal of Materials Science: Materials in Electronics, vol. 31, no. 18, pp. 15267–15276, 2020. <https://doi.org/10.1007/s10854-020-04091-2>. **Impact factor: 2.8.**

13. Renu Rajput and **Rakesh Vaid**, –Flash memory devices with metal floating gate/metal nanocrystals as the charge storage layer: a status review| *Facta Universitatis, Series: Electronics and Energetics* 33 (2), 155-167, 2020. <https://doi.org/10.2298/FUEE2002155R> **Impact Factor: 0.6**
14. Renu Rajput, Richa Gupta, Rakesh K Gupta, Ajit Khosla, **Rakesh Vaid**, –Fabrication and characterization of n-Si/SiON/metal gate structure for future MOS technology| *Microsystems Technologies*, 24 (10), 4179-4185, Springer Berlin Heidelberg, 2018 [ISSN No: 0946-7076] <https://doi.org/10.1007/s00542-017-3703-3> **Impact factor: 2.276.**
15. Deepika Jamwal, Rakesh K Gupta, Ajit Khosla, **Rakesh Vaid**, –Spin-coated single walled carbon nanotubes confirms p–n junction diode behavior| *Microsystems Technologies*, 24 (10), 4211-4215, Springer Berlin Heidelberg, 2018 [ISSN No: 0946-7076] <https://doi.org/10.1007/s00542-018-3713-9> **Impact factor: 2.276.**
16. Richa Gupta and **Rakesh Vaid**, “Structural and Electrical Characteristics of Oxygen Annealed ALD-ZrO₂/SiON Gate Stack for Advanced CMOS Devices| *ECS Transactions*, vol. 85, no. 13, pp. 1481-1487, 2018. **doi:10.1149/08513.1481ecst Impact Factor:0.59**