

Prof Rakesh Vaid

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

1. 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).
2. 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**
3. 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).
4. 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)
5. **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)
6. 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 \(4D\MS+SoRo\)*](#)
7. 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 \(4D\MS+SoRo\)*](#)
8. Deepika Jamwal, Nandu B Chaure, **Rakesh Vaid**, -Amorphous ZrO_x 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**.
9. 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**
10. 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**
11. **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**.

12. 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**
13. 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.**
14. 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.**
15. 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**