

Publication Details of Prof. (Dr.) Angsuman Sarkar as of 01-September-2021

(Click the links below to see the details)

[Book Publication: 6](#)

[Contributed Book Chapter Publication: 10](#)

[Journal Publication: 86](#)

[Conference Publication: 52](#)

List of Book Publication:

1. Angsuman Sarkar, Swapnadip De, Manash Chanda, Chandan KumarSarkar, "Low Power VLSI Design Fundamentals", DE GRUYTER OLDENBOURG , Germany, August 2016, ISBN: 978-3-11-045529-8, Edition: 1st, No. of Pages:310, Price: 129,95 € / \$182.00 / £97.99, [Online Link](#)
2. Angsuman Sarkar and Chandan Kumar Sarkar, "Solid State, Microelectronic and Optoelectronic Devices", University Press (India) Pvt. Ltd., Hyderabad, India, Distributed by Orient BlackSwan Pvt. Ltd., January 1, 2012, ISBN: 978-81-7371-770-3, Edition: 1st, No. of Pages:664, Price: 410 (INR), [Online Link](#)
3. Angsuman Sarkar, Swapnadip De and Chandan Kumar Sarkar, "VLSI design and EDA tools", Scitech Publications (India) Pvt. Ltd. Chennai, India, January 1, 2014, ISBN:978-81-8371-497-6, Edition: 2nd, No. of Pages: 905, Price: 650 (INR), [Online Link](#)
4. Angsuman Sarkar; Swapnadip De; C K Sarkar, "VLSI Design and EDA Tools", Scitech Publications (India) Pvt Ltd., Chennai, India, January 1, 2011, ISBN: 978-81-8371-452-5, Edition: 1st, No. of Pages:1430, Price: 750 (INR), [Online Link](#)
5. Angsuman Sarkar, "Subthreshold Modeling of Submicron MOSFETs Short Channel Mosfets: Conventional and Dual Material Gate (DMG)", LAMBERT Academic Publishing, GmbH & Co. KG, Address: Dudweiler Landstraße 99, 66123 Saarbrücken, Germany, October 7, 2011, ISBN: 978-3-8465-2209-7, Edition: 1st, No. of Pages:104 Price: 49.00€, [Online Link](#)
6. Angsuman Sarkar, "Subthreshold Surface Potential Model for Short-Channel Mosfet: Using Pseudo 2d Analysis", LAMBERT Academic Publishing, GmbH & Co. KG, Address: Dudweiler Landstraße 99, 66123 Saarbrücken, Germany, February 27, 2014, ISBN: 978-3659126093 Edition: 1st, No. of Pages: 84, Price: 35.50€ [Online Link](#)

List of Contributed Book Chapter Publication:

10. Title of the Book: “Emerging Trends in Terahertz Engineering and System Technologies Devices, Materials, Imaging, Data Acquisition and Processing”, Book Chapter Name: “Performance Estimation of Defected Ternary Photonic Crystal-Based Bandpass Filter Beyond 100 THz for All-Optical Circuit”, Authors: Arpan Deyasi, Angsuman Sarkar, Publisher: Springer, Singapore, Editor: A. Biswas et al., Date of Publication: March 2021, Print ISBN: 978-981-15-9765-7, Online ISBN: 978-981-15-9766-4, [Online Link](#)
9. Title of the Book: “Advanced Materials for Future Terahertz Devices, Circuits and Systems”, Book Chapter Name: “Analysis of Optical Performance of Dual-Order RAMAN Amplifier Beyond 100 THz Spectrum”, Authors: Rajarshi Dhar, Arpan Deyasi, Angsuman Sarkar, Publisher: Springer Singapore, , Editor: A. Acharyya et al., Date of Publication: March,2021, Print ISBN: 978-981-334-488-4, Electronic ISBN: 978-981-334-489-1, [Online Link](#)
8. Title of the Book: “Computational Intelligence in Digital Pedagogy”, Book Chapter Name: “Authentic Pedagogy: A Project-Oriented Teaching–Learning Method Based on Critical Thinking”, Authors: Arpan Deyasi, Swapan Bhattacharyya, Pampa Debnath, Angsuman Sarkar, Publisher: Springer, Singapore, , Editor: A. Deyasi et al., Date of Publication: November 20, 2020, ISBN: 978-981-15-8743-6, [Online Link](#)
7. Title of the Book: “Emerging Trends in Terahertz Solid-State Physics and Devices”, Book Chapter Name: “THz Bandpass Filter Design Using Metamaterial-Based Defected 1D Photonic Crystal Structure”, Authors: Arpan Deyasi, Angsuman Sarkar, Publisher: Springer, Singapore, Editor: A. Biswas et. al., Date of Publication: March 21, 2020, ISBN: 978-981-15-3234-4, [Online Link](#)
6. Title of the Book: “Methodologies and Application Issues of Contemporary Computing Framework”, Book Chapter Name: “Investigation of the Effect of Barrier Layer Engineering on DC and RF Performance of Gate-Recessed AlGaIn/GaN HEMT”, Authors: Shubham Mondal, Sritoma Paul, Angsuman Sarkar, Publisher: Springer Nature Singapore Pte Ltd. , Editor: J . K. Mandal et al., Date of Publication: 22 September 2018, 978-981-13-2344-7, [Online Link](#)
5. Title of the Book: “Nanotechnology Synthesis to Applications”, Book Chapter Name: “Nanoscience with Graphene”, Authors: Dr. Angsuman Sarkar, Publisher: CRC Press USA, Editor: S. Roy et. al., Date of Publication: January 1, 2018, ISBN: 9781138032736, [Online Link](#)
4. Title of the Book: “Nanotechnology Synthesis to Applications”, Book Chapter Name: “Electrical transport in Nanostructure”, Authors: Dr. Angsuman Sarkar, Publisher: CRC Press USA, Editor: S. Roy et. al. , Date of Publication: January 1, 2018, ISBN: 9781138032736, [Online Link](#)
3. Title of the Book: “Computational Science and Engineering: Proceedings of the International Conference on Computational Science and Engineering”, Book Chapter Name: “Analytical modeling and sensitivity analysis of dielectric-modulated junctionless gate all around gate stack—FET as biosensor”, Authors: A. Chakraborty, A. Sarkar, Publisher: CRC Press, USA, Editor: A. Deyasi et. al., Date of Publication: 19 December 2016, ISBN: 978-1-138-02983-5, [Online Link](#)
2. Title of the Book: “Intelligent computing,Communication and Devices Advances in Intelligent Systems and Computing”, Book Chapter Name: “An Analytical Surface Potential Model of Surrounding Gate Tunnel FET”, Authors: Soumen Paul, Angsuman Sarkar, Volume 308, 2015, pp 479-486, Publisher: Springer, Singapore, Editor: L. Jain et. al., Date of Publication: August 26, 2014, ISBN: 978-81-322-2011-, [Online Link](#)
1. Title of the Book: “TCAD Simulation for VLSI MOSFET”, Book Chapter Name: “Device Simulation Using SILVACO ATLAS Tool”, Authors: Dr. Angsuman Sarkar, Publisher: CRC Press, Taylor & Francis Group, UK, Editor: C.K.Sarkar, Date of Publication: May 16, 2013, ISBN: 978-1-46-651265-8, [Online Link](#)

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1. P. Debnath, A. Deaysi, U. Mondal, A. Sarkar, "[Analytical investigation of double negative material based photonic filter performance at 1550 nm](#)", JOURNAL OF OPTOELECTRONICS AND ADVANCED MATERIALS, Vol. 23, No. 7-8, July – August 2021, p. 319 - 326
2. S Sinha, T Paul, S Mishra, S Shaw, K Biswas, D De, A Sarkar, [In Vivo Biointeraction and Alleviation of Toxicity of MWCNTs upon Functionalization with ssDNA in a Caenorhabditis elegans Model](#), Journal of Electronic Materials, Springer, 1-17
3. P Mitra, J Bhaumik, A Sarkar, [Decoupling Capacitor Estimation and Allocation using Optimization Techniques for Power Supply Noise Reduction in System-on-Chip](#), Journal of Electronic Testing, Springer, 1-5
4. S Misra, SM Biswal, B Baral, SK Swain, A Sarkar, SK Pati, [Analytical modelling of a Cyl-JLAM MOSFET in the subthreshold region using distinct device geometry](#), Journal of Computational Electronics, Springer, 20 (1), 480-491
5. B Das, N Chand, A Sarkar, [Review the Performance of Different Digital Modulation Techniques with Suitable Error Control Codes in Telehealth Services](#), Advances in Medical Physics and Healthcare Engineering, 341-352
6. N Chand, S Bhattacharyya, A Sarkar, [A Novel Encryption Technique to Protect Patient Health Information Electronically Using Playfair Cipher 15 by 14 Matrix](#), Advances in Medical Physics and Healthcare Engineering, 423-431
7. A Chakraborty, A Sarkar, A Sarkar, [Analytical model and sensitivity analysis of a gate-engineered dielectric modulated junctionless nanowire transistor-based biosensor](#), Electronic Devices, Circuits, and Systems for Biomedical Applications, 69-93
8. R Dhar, A Deyasi, A Sarkar, [Analysis of Optical Performance of Dual-Order RAMAN Amplifier Beyond 100 THz Spectrum](#), Advanced Materials for Future Terahertz Devices, Circuits and Systems 727, 193
9. A Deyasi, A Sarkar, [Performance Estimation of Defected Ternary Photonic Crystal-Based Bandpass Filter Beyond 100 THz for All-Optical Circuit](#), Emerging Trends in Terahertz Engineering and System Technologies: Devices
10. A Deyasi, N Pramanik, A Sarkar, [Detecting Signature of Virus Using Metamaterial-Based One-Dimensional Multi-layer Photonic Crystal Structure Under Polarized Incidence](#), Modern Techniques in Biosensors, 199-214
11. A Deyasi, S Bhattacharyya, P Debnath, A Sarkar, [Authentic Pedagogy: A Project-Oriented Teaching–Learning Method Based on Critical Thinking](#), Computational Intelligence in Digital Pedagogy, 1-20

2020

1. J Chowdhury, A Sarkar, K Mahapatra, JK Das, [Novel center potential based analytical sub-threshold model for dual metal broken gate TFET](#), Circuit World, Emerald Insight
2. P Mitra, A Sarkar, "[Soft Computing Techniques Based CAD Approach for Power Supply Noise Reduction in System-on-Chip](#)", Journal of Electronic Testing, 1-5, 2020, Springer
3. S. Misra, S. M. Biswal, B. Baral, S. K. Swain, A. Sarkar & S. K. Pati, "[Analytical modelling of a Cyl-JLAM MOSFET in the subthreshold region using distinct device geometry](#)", Journal of Computational Electronics (2020), Published: 15 September 2020, Springer
4. A. Basak & A. Sarkar, '[Quantum Analytical Model for Lateral Dual Gate UTBB SOI MOSFET for Analog/RF Performance](#)', Silicon (2020), Springer
5. S Sinha, S Shaw, K Biswas, D De, SC Das, A Sarkar, J Bandyopadhyay, '[Favorable influence of ssDNA-functionalized SWCNT on the navigation pattern of C. elegans](#)', Microsystem Technologies, 1-14, June 2020, Springer
6. A. Deyasi, U. Dey, S. Das, S. De & A. Sarkar, "[Computing Photonic Bandgap from Dispersion Relation for TM Mode Propagation Inside Metamaterial-based 1D PhC](#)", Micro and Nanosystems (2020) 12: 1., Bentham Science

7. M. Mukherjee, M. Chanda, A. Sarkar & A. Dey, "[Effect of band non-parabolicity on energy sub-band profile for nano-dimensional MOSFET](#)", *Microsystem Technologies*, Springer, Feb 2020
8. A. Deyasi, S. Mukherjee, A. K. Bhattacharjee and A. Sarkar "[Classification of single and double-gate nanoscale MOSFET with different dielectrics from electrical characteristics using soft computintechniques](#)", *International Journal of Information Technology*, Online first 05-Apr, 2019,DOI <https://doi.org/10.1007/s41870-019-00301-1>, Published by Springer
9. A. Deyasi, A. Sarkar, "[Effect of material composition on noise performance of sub-micron high electron mobility transistor](#)", *Microsystem Technologies*, Springer
10. A Bhattacharya, A Maity, D Bhardwaj, S Banerjee, D De, A Sarkar, S Bari, "[Design of High Speed and Low-Power NOR Based Dynamic CMOS PLA for Logic Function Realization](#)", <https://dx.doi.org/10.2139/ssrn.3518279>, Available at SSRN 3518279
11. A Deyasi, G Saha, B Sen, A Sarkar, '[Computation of Subthreshold Slope in Submicron-HEMT for Different Structural Parameters with Parasitic Effects](#)' - *Nanomaterials and Energy*, 15/7/2020

2019

1. A. Deyasi, and A. Sarkar, "[Calculating Current Density and Quantum Efficiency of p-n Junction Solar Cell with Quasi-Fermi Level approximation](#)", *International Journal of Nanoparticles [Inderscience]*, vol. 11, No. 1, pp. 27-36, 2019 [DOI: 10.1504/IJNP.2019.097923]
2. S. Paul, S. Mondal, & A. Sarkar, "[Characterization and analysis of low-noise GaN-HEMT based inverter circuits](#)", *Microsystem Technologies*, Springer, Online First on 20-Aug-2019
3. A Deyasi, A Sarkar, "[Effect of temperature on electrical characteristics of single electron transistor](#)", *Microsystem Technologies*, Springer Berlin Heidelberg, 25(5), 1875-1880, May 2019
4. JK Mandal, A Sarkar, "[Special Issue on the 2nd International Conference Devices for Integrated Circuits \(DevIC-2017\)](#)", *Microsystem Technologies* 25 (5), 1853-1853
5. A. Basak, M. Chanda, A. sarkar, Drain current modelling of unipolar junction dual material double-gate MOSFET (UJDMG) for SoC applications, *Microsystem Technologies*, DOI: [10.1007/s00542-019-04691-x](https://doi.org/10.1007/s00542-019-04691-x)
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3. S Sinha, K Biswas, S Shaw, D De, A Sarkar, J Bandyopadhyay, "[Conductivity Modulation of SWCNT by Its Sidewall Functionalization Through Heavily Doping with DNA Nucleobase Adenine](#)", *Materials Focus*, *American Scientific Publishers*, Vol. 7, No. 1, pp. 11-17
4. K Biswas, A Sarkar, CK Sarkar, "[Fin shape influence on analog and RF performance of junctionless accumulation-mode bulk FinFETs](#)", *Microsystem Technologies*, Springer Berlin Heidelberg, 1-8, First Online: 18 January 2018
5. A Deyasi, A Sarkar, "[Variation of optical bandwidth in defected ternary photonic crystal under different polarisation conditions](#)", *International Journal of Nanoparticles*, Inderscience Publishers, 10 (1-2), 27-34
6. A Chakraborty, D Singha, A Sarkar, "[Staggered heterojunctions-based tunnel-FET for application as a label-free biosensor](#)", *International Journal of Nanoparticles*, Inderscience Publishers, 10 (1-2), 107-116
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2017

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2. Sudhansu Mohan Biswal, Biswajit Baral, Debashis De, A Sarkar, [Simulation and comparative study on analog/RF and linearity performance of III–V semiconductor-based staggered heterojunction and InAs nanowire\(nw\) Tunnel FET](#), Microsystem Technologies, Springer Berlin Heidelberg, pp. 1-7, First Online: 04 December 2017
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4. Biswajit Baral, Sudhansu Mohan Biswal, Debashis De, Angsuman Sarkar, [Radio frequency/analog and linearity performance of a junctionless double gate metal–oxide–semiconductor field-effect transistor](#), SIMULATION, Vol 93, Issue 11, pp. 985 - 993, DOI: <https://doi.org/10.1177/0037549717704308>
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7. Surajit Bari, Debashis De, Angsuman Sarkar, [Design of low power, high speed 4 bit binary to Gray converter with \$8 \times 4\$ barrel shifter using nano dimensional MOS transistor for arithmetical, logical and telecommunication circuit and system application](#), Microsystem Technologies, DOI: 10.1007/s00542-017-3435-4
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1. Angsuman Sarkar and Chandan Kr. Sarkar "[Triple Material Surrounding Gate MOSFET for Suppression of SCEs](#)", Reason- A Technical Journal, Volume-25, pp. 1-8, ISSN No. 2277-1654, DOI:10.21843/reas/2015/1-8/108322
2. Kalyan Biswas, Angsuman Sarkar, and Chandan Kumar Sarkar "[Impact of Fin Width Scaling on RF/Analog Performance of Junctionless Accumulation-Mode Bulk FinFET](#)", *ACM Journal on Emerging Technologies in Computing Systems (JETC)*, vol. 12, no. 4, Article 36 (May 2016), 12 pages. DOI=<http://dx.doi.org/10.1145/2903143>, 2016
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12. Avik Chakraborty, Angsuman Sarkar, ["Two-dimensional analytical model of asymmetric dual Material double-gate MOSFET"](#), Advances in Industrial Engineering and Management" Vol. 5, No. 2, pp. 178-182, (2016), doi: 10.7508/178 aiem.2016.02.002, ISSN: 2222-7059 (print), ISSN: 2222-7067 (online), <http://www.aspbs.com/aiem> (American Scientific Publisher)

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6. Siddhartha Mondal, Debabrata Naru, Angsuman Sarkar, and Chandan Kumar Sarkar, ["An Analytical Surface Potential Based Threshold Voltage Model of Triple Material Surrounding Gate Schottky Barrier MOSFET"](#), Journal of Computational and Theoretical Nanoscience, American Scientific Publishers, USA, Vol. 12, 1-9, February 1, 2015, Impact Factor: 1.032
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