

List of Publications

Published papers (Journal + conference proceedings): 140 (as of April, 2023)

 <https://scholar.google.com/citations?hl=en&user=UclSx6kAAAAJ>

 https://www.researchgate.net/profile/M_Alam23

 <https://orcid.org/0000-0002-1229-4443>

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Book Chapter

(1) **M. Shah Alam**, “Solar Home System Design,” chapter 5 in the book entitled “Solar Home System”, published by GIZ, Dhaka, Bangladesh, March 2013.

Peer Reviewed Journals

(53) Md. Tanvir Mahmud Prince and **M. Shah Alam**, “Comprehensive Analysis of Dual Core Photonic Crystal Fibers for Optimizing Optical Properties Towards Highly Coherent Supercontinuum Generation,” *IEEE/OSA Journal of Lightwave Technology*, DOI: [10.1109/JLT.2023.3264989](https://doi.org/10.1109/JLT.2023.3264989)

(52) T. A. M. R. Shahriar, O. Islam, M. I. Tahmid, M. Z. Alam, and **M. Shah Alam**, “Highly Coherent Supercontinuum Generation in Circular Lattice Photonic Crystal Fibers Using Low-power Pulses,” *Optik - International Journal for Light and Electron Optics*, Elsevier, 272 (2023) 170258, doi: <https://doi.org/10.1016/j.ijleo.2022.170258>.

(51) M. R. Karim, N. Al Kayed, N. Jahan, **M. Shah Alam**, and B.M.A. Rahman, "Study of Highly Coherent Mid-Infrared Supercontinuum Generation in CMOS Compatible Si-Rich SiN Tapered Waveguide," *IEEE/OSA Journal of Lightwave Technology*, vol. 40, no. 13, pp. 4300-4310, July 2022, DOI: [10.1109/JLT.2022.3157792](https://doi.org/10.1109/JLT.2022.3157792)

(50) K. M. Mustafizur Rahman, **M. Shah Alam**, and M. Asiful Islam, “Highly sensitive gold-coated surface plasmon resonance photonic crystal fiber sensor in near-infrared region,” *Results in Optics*, Elsevier, 100223, vol. 7, 2022, <https://doi.org/10.1016/j.rio.2022.100223>

(49) K. M. M. Rahman, **M. Shah Alam**, and M. A. Islam, “Highly Sensitive Surface Plasmon Resonance Refractive Index Multi-Channel Sensor for Multi-Analyte Sensing,” *IEEE Sensors Journal*, vol. 21, issue 24, pp. 27422 – 27432, 15 December, 2021, <https://doi.org/10.1109/JSEN.2021.3126624>

(48) M. Z. Alam, M. I. Tahmid, S. T. Mouna, M. A. Islam, and **M. Shah Alam**, “Design of a Novel Star Type Photonic Crystal Fiber for Mid-Infrared Supercontinuum Generation,” *Optics Communications*, 500 (2021) 127322, <https://doi.org/10.1016/j.optcom.2021.127322>

(47) M. F. Hassan, R. H. Sagor, M. R. Amin, M. R. Islam, and **M. Shah Alam**, “Point of Care Detection of Blood Electrolytes and Glucose Utilizing Nano-Dot Enhanced Refractive Index Based Plasmonic Biosensor,” *IEEE Sensors Journal*, vol. 21, no. 16, pp. 17749-17757, Aug. 2021, [http://doi.org/10.1109/JSEN.2021.3082756](https://doi.org/10.1109/JSEN.2021.3082756)

- (46) K. M. M. Rahman, **M. Shah Alam**, R. Ahmed, and M. A. Islam, "Irregular Hexagonal Core Based Surface Plasmon Resonance Sensor in Near-infrared Region," *Results in Physics*, 23 (2021) 103983, <https://doi.org/10.1016/j.rinp.2021.103983>
- (45) M. M. H. Polash, S. Biswas, and **M. Shah Alam**, "Comprehensive Optimization of Electronic and Optical Properties of Polar III-Nitride Laser," *Applied Physics B: Lasers and Optics*, vol. 127, 30, Feb. 2021, <https://doi.org/10.1007/s00340-021-07578-w>
- (44) K. B. M. Rakib Hasan, M. A. Islam, and **M. Shah Alam**, "Design of a Broadband Single Mode Hybrid Plasmonic Waveguide Incorporating Silicon Nanowire," *Optical Materials Express*, vol. 10, no. 11, pp. 2783-2799, Nov. 2020, <https://doi.org/10.1364/OME.405037>
- (43) K. B. M. Rakib Hasan, Md. Asiful Islam, and **M. Shah Alam**, "Small footprint symmetrical graphene hybrid plasmonic waveguides for high-speed broadband optical modulation," *J. Opt. Soc. Am. B*, vol. 37, issue 9, pp. 2696-2706, Sept. 2020, <https://doi.org/10.1364/JOSAB.390775>
- (42) Md. Sazzad Hossain, Md. Towsif Abir, J. L. Volakis, **M. Shah Alam**, Md. Asiful Islam, "A Phase Decomposition Algorithm for Multiphase Flows Using Electrical Capacitance Tomography," *IEEE Sensors Journal*, vol. 20, issue: 24, pp. 14924-14931, Dec. 2020, <https://doi.org/10.1109/JSEN.2020.3009673>
- (41) Zahidur Rahman, Md. Ashfaque Rahman, Md. Asiful Islam, and **M. Shah Alam**, "Design of an Elliptical Air-Hole Dual-Core Photonic Crystal Fiber for Over Two Octaves Spanning Supercontinuum Generation," *J. of Nanophotonics*, SPIE, vol. 13, no. 4, 046013, Oct-Dec. 2019, <https://doi.org/10.1117/1.JNP.13.046013>
- (40) K. B. M. Rakib Hasan, M. A. Noman Sarker, M. A. Islam, and **M. Shah Alam**, "Coupling Characteristics of Surface Plasmons in Coupled Elliptical Nanowires", *OSA Continuum*, vol. 1, no. 4, pp. 1414-1428, 15 Dec. 2018.
- (39) M. Ababil Hossain and **M. Shah Alam**, "Performance Evaluation of Rectangular Microstrip Patch Antennas Loaded with Plastic and Barium-Titanate Substrates at GSM 1800 MHz Band," *Journal of Antennas and Propagation*, vol. 6, pp. 36-42, Sept. 2018, <https://doi.org/10.4236/ojapr.2018.63004>.
- (38) M. M. H. Polash, **M. Shah Alam** and S. Biswas, "Design and Analysis of InN-In_{0.25}Ga_{0.75}N Single Quantum Well Laser for Short Distance Communication Wavelength," *Optical Engineering, SPIE*, vol. 57, no. 3, pp. 036110 (1-7), March 2018
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- (36) M. M. H. Polash and **M. Shah Alam**, "Optical Gain Optimization of Al_{0.8}Ga_{0.2}N-Delta-GaN Quantum Well Laser in Ultraviolet Spectra Using Genetic Algorithm," *ECS Transactions*, vol. 69, no. 12, pp. 81-90, 2015.
- (35) M. A. Islam and **M. Shah Alam**, "Ultralarge Negative Dispersion Single Polarization Photonic Crystal Fiber," *Optical Engineering*, SPIE, vol. 53, no. 9, pp. 090501(1-3), Sept. 2014.
- (34) D. Hasan and **M. Shah Alam**, "Ultra-Broadband Confinement in Deep Sub-Wavelength Air Hole of a Suspended Core Fiber," *IEEE/OSA Journal of Lightwave Technology*, vol. 32, no. 8, pp. 1434-1441, April 15, 2014.
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- (32) M. A. Islam and **M. Shah Alam**, "An Extremely Large Mode Area Microstructured Core Leakage Channel Fiber with Low Bending Loss," *IEEE/OSA Journal of Lightwave Technology*, vol. 32, no. 2, pp. 250-256, Jan. 2014.
- (31) M. A. Islam and **M. Shah Alam**, "Equiangular spiral photonic crystal fibers with low bending loss," *Optical Engineering, SPIE*, vol. 52, no. 10, pp. 100502(1-3), Oct. 2013.

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- (24) I. Zareen, **M. Shah Alam**, and M. Amin, "Analysis of Microwave and Optical Devices by Using Quasi-TEM Finite Element Technique," *Journal of Electrical Engineering, The Institution of Engineers, Bangladesh*, vol. EE 37, no. 2, pp. 15-21, Dec. 2011.
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- (18) **M. Shah Alam**, M. K. Hassan, and M. S. Ali, "Characteristic Analysis of Traveling Wave Electrooptic Modulators on Lithium Niobate Substrate," *International Journal of Microwave and Optical Technology (IJMOT)*, ISSN: 1553-0396, vol. 5, no. 3, pp. 166-175, May 2010.
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c) Conferences (national and international conferences)

i) Proceedings of International Conferences

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(83) K. B. M. Rakib Hasan, Md. Asiful Islam, and **M. Shah Alam**, "Design of a Broadband Hybrid Plasmonic Waveguide for High Bulk Index Sensitivity," published in the proceedings of Eleventh International Conference on Electrical and Computer Engineering, ICECE 2020 (virtual), pp. 365-368, 17-19 December 2020, Dhaka, Bangladesh, published in IEEE Xplore.

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(72) Md Mozammel Kamal Raju and **M. Shah Alam**, "Changing of Dielectric Properties Through Light Matter Interaction Assisted by External Voltage," *Proceedings of Tenth International Conference on Electrical and Computer Engineering, ICECE 2018*, pp. 329-332, 20-22 December 2018, Dhaka, Bangladesh. Published in IEEE Xplore.

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