



Editorial

Microwave—A New Open Access Journal for Microwave Technologies

Changjun Liu 🕒

College of Electronics and Information Engineering, Sichuan University, Chengdu 610064, China; cjliu@scu.edu.cn

Microwave technologies have long been at the forefront of scientific and engineering innovation, driving advancements in wireless communications, radar, satellites, medical applications, wireless power transfer, and more [1,2]. As our world becomes increasingly wirelessly interconnected, the need for cutting-edge research in microwave science is more critical than ever. The evolution of a fully interconnected global network, driven by next-generation communication systems, the proliferation of Internet of Things (IoT) devices, and the growing demand for renewable energy solutions, hinges on breakthroughs in microwave systems and components.

This is an excellent time for the field of microwaves. The topics and challenges continue to expand, encompassing wireless energy transfer, biomedical applications, high-frequency semiconductor devices, and electromagnetic compatibility in complex systems. To sustain progress, we need platforms that showcase technical achievements, foster interdisciplinary collaboration, address emerging challenges, and bridge the gap between academia and industry.

For this reason, we are thrilled to introduce *Microwave*, a new open-access journal dedicated to the latest advancements in microwave science and technology. *Microwave* invites high-quality submissions from researchers, engineers, and practitioners worldwide, focusing on innovative scientific research, cutting-edge engineering applications, and theoretical methodologies that create real-world impact.

We particularly encourage submissions in the following areas:

- Microwave Circuits and Systems: exploring high-performance devices, novel materials, and circuit designs for applications in communications, aerospace, and defense [3].
- Wireless Power Transfer and Energy Harvesting: highlighting microwave-based wireless energy transfer systems that unlock new possibilities for the IoT and renewable energy integration [4].
- Antennas and Propagation: showcasing breakthroughs in compact, efficient, and adaptive antenna systems and their integration into advanced communication platforms [5].
- Electromagnetic Wave Applications: covering microwave imaging, sensing, and therapeutic technologies for healthcare and environmental monitoring [6].
- Advanced Computational and Simulation Methods: developing algorithms and tools that push the boundaries of microwave design and optimization [7].

Beyond these focus areas, we welcome manuscripts on all topics related to microwave science and technology [8–10].

In addition to driving technical innovation, we recognize the importance of addressing broader challenges, including sustainability, affordability, and accessibility. Contributions that explore the environmental impact of microwave technologies, propose eco-friendly



Received: 21 December 2024 Accepted: 23 December 2024 Published: 9 January 2025

Citation: Liu, C. *Microwave*—A New Open Access Journal for Microwave Technologies. *Microwave* **2025**, *1*, 1. https://doi.org/10.3390/microwave1010001

Copyright: © 2025 by the author. Licensee MDPI, Basel, Switzerland. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (https://creativecommons.org/ licenses/by/4.0/). Microwave 2025, 1, 1 2 of 2

materials, or demonstrate how microwaves can address global challenges like clean energy, food security, and health equity are highly encouraged.

As the Editor-in-Chief, I am honored to collaborate with an esteemed editorial board and with you, the contributors, to establish *Microwave* as a platform for impactful research and meaningful dialogue. Together, we have the opportunity to shape the future of microwave technology and its pivotal role in building a smarter, more sustainable world. As the saying goes, "The best way to predict the future is to create it". Let us create the future of microwaves together.

We warmly invite you to submit your manuscripts to *Microwave*. Whether your work is theoretical, experimental, or application-driven, if it advances the state of the art or addresses pressing global needs, we want to hear from you. Let us make *Microwave* the hub for innovation and collaboration in this transformative field.

Conflicts of Interest: The author declares no conflict of interest.

References

- 1. Southworth, G.C. Beyond the Ultra-Short Waves. Proc. IRE 1943, 31, 319–330. [CrossRef]
- 2. Staecker, P. Microwave industry outlook—Overview. IEEE Trans. Microw. Theory Tech. 2002, 50, 1034–1036. [CrossRef]
- 3. Roy, C.; Wu, K. A Review of Electromagnetics-Based Microwave Circuit Design Optimization. *IEEE Microw. Mag.* **2024**, 25, 16–40. [CrossRef]
- Shinohara, N. History and Innovation of Wireless Power Transfer via Microwaves. IEEE J. Microw. 2021, 1, 218–228. [CrossRef]
- 5. Carver, K.; Mink, J. Microstrip antenna technology. IEEE Trans. Antennas Propag. 1981, 29, 2–24. [CrossRef]
- 6. Liu, C.; Liao, C.; Peng, Y.; Zhang, W.; Wu, B.; Yang, P. Microwave Sensors and Their Applications in Permittivity Measurement. Sensors 2024, 24, 7696. [CrossRef] [PubMed]
- Chen, Z.; Wang, C.-F.; Hoefer, W.J.R. A Unified View of Computational Electromagnetics. IEEE Trans. Microw. Theory Tech. 2022, 70, 955–969. [CrossRef]
- 8. Foster, K.R.; Chou, C.-K.; Omar, A. Health Aspects of Millimeter-Wave Exposures in 5G and Beyond. *IEEE Microw. Mag.* **2025**, *26*, 70–82. [CrossRef]
- 9. Adam, D. Out of the kitchen. *Nature* 2003, 421, 571–572. [CrossRef] [PubMed]
- Schurig, D.; Mock, J.J.; Justice, B.J.; Cummer, S.A.; Pendry, J.B.; Starr, A.F.; Smith, D.R. Metamaterial Electromagnetic Cloak at Microwave Frequencies. Science 2006, 314, 977–980. [CrossRef] [PubMed]

Short Biography of Author



Prof. Dr. Changjun Liu has been a professor at Sichuan University since 2004. He currently serves as the Executive Deputy Director of the Key Laboratory of Wireless Power Transfer under the Ministry of Education, China. Dr. Liu is a Senior Member of the IEEE and the Chinese Institute of Electronics (CIE), an Outstanding Reviewer for IEEE Transactions on Microwave Theory and Techniques (TMTT), and has been recognized as an Academic and Technological Leader in Sichuan Province. Additionally, he served as a member of the IEEE Technical Committee on Microwave Power Transmission (TC-25). Dr. Liu's research interests lie at the forefront of microwave and millimeter-wave technologies, with a primary focus on wireless power transmission, microwave circuits, energy applications of microwaves, microwave power combining, and the exploration of microwave-specific effects.

Disclaimer/Publisher's Note: The statements, opinions and data contained in all publications are solely those of the individual author(s) and contributor(s) and not of MDPI and/or the editor(s). MDPI and/or the editor(s) disclaim responsibility for any injury to people or property resulting from any ideas, methods, instructions or products referred to in the content.