
Call for Papers

Journal on Selected Topics in Quantum Electronics

Perspective Papers

Focusing on Scientific Discourse and Methodological Standards to Shape Future Research Activities

Motivation and Scope

Scientific progress relies not only on new experimental or theoretical results but also on the continuous critical examination, debate, and refinement of existing knowledge. Precise definitions, rigorous measurement protocols, and transparent reporting standards are essential for maintaining scientific integrity and long-term impact.

To foster this vital aspect of scientific evolution, IEEE JSTQE is launching a new section and article submission type dedicated to constructive scientific discourse, methodological clarification, and community-driven standardization. This section provides an open forum for critical analysis, expert perspectives, and technical commentary that complement traditional research articles and strengthen the foundations of quantum electronics and photonics.

Submissions are welcome from across the broader photonics and quantum electronics communities that fall under [the scope of JSTQE](#).

Join us in refining the rigorous standards that drive our community forward.

Topics and Guidelines

Contributions may include, but are not limited to, the following categories.

1. Critical Commentary and Technical Correspondence

We invite concise, scholarly commentaries that engage rigorously with the literature, including:

- **Identification of Shortcomings:** Discussion of technical inconsistencies, physical misconceptions, or interpretation errors in recently published work.
- **Re-evaluation of Results:** Analysis of reported findings under alternative theoretical models, assumptions, or boundary conditions.
- **Scholarly Debate:** Constructive arguments on emerging or controversial topics that would benefit from open discussion and clarification.

Note: All commentaries must maintain a constructive, professional tone and be grounded in quantitative or theoretical analysis.

2. Standardization, Metrology, and Best Practices

As photonics technologies mature, reproducibility and comparability increasingly depend on shared standards. Submissions may address:

- **Measurement Protocols:** Proposed or refined standards for optical reflectance, emissivity, thermal baselines, or environmental conditions.
- **Benchmarking:** Methodologies for the fair comparison of devices, materials, or system performance.

- **Terminology:** Clarification and unification of definitions to eliminate ambiguity in reporting (e.g., defining ambient reference states, sub-ambient operation, or efficiency metrics).

3. Reproducibility Studies and Negative Results

Recognizing the importance of transparency and reliability, this section encourages:

- **Replication Studies:** Carefully documented replication of influential experiments, highlighting discrepancies, limitations, or sensitivities.
- **Negative Results:** Well-designed reports of negative or null results that provide insight into physical bounds, experimental constraints, or methodological pitfalls.

Additional Instructions and Submission Guidelines

Manuscripts should be focused, concise, technically rigorous, and written in a constructive and professional tone. To ensure accessibility and rapid handling, we would limit submissions to 2–3 pages, including 1–2 figures, and limit references to 20.

An example can be found at:

[1] Q. Gan and A. Raman, "Guest Editorial: When Photonics Meets Climate Mitigation: The Evolution of Knowledge Through Scientific Discourse," in *IEEE Journal of Selected Topics in Quantum Electronics*, vol. 31, no. 6: Photon. for Climate Chng. Mitigation and Adapt., pp. 1-2, Nov.-Dec. 2025, Art no. 0201203, doi: [10.1109/JSTQE.2025.3633926](https://doi.org/10.1109/JSTQE.2025.3633926).

Submission Guidelines

Submissions will be reviewed in accordance with the normal procedures of the Journal and papers must be formatted according to the Information for Authors found at:

<https://ieeephotonics.org/publications/journal-of-selected-topics-in-quantum-electronics/>

- **Select the paper type "Perspective Paper"**

EARLY ACCESS: DOI-citable articles will be published online after acceptance upon submission of final files and rights selection –well in advance of issue publication.

For further information, contact the JSTQE Editor-in-Chief:

Qiaoqiang Gan, King Abdullah University of Science and Technology, Saudi Arabia

Email: qiaoqiang.gan@kaust.edu.sa