Optica Quantum Review Criteria May 2023

Optica Quantum provides rapid, open-access publication of peer-reviewed research articles reporting highly novel and significant results in quantum information science and technology (QIST), as enabled by optics and photonics. The journal scope encompasses theoretical and experimental research as well as technological advances in and applications of quantum optics. To meet the goal of publishing timely and high-impact research in *Optica Quantum*, submitted papers are subjected to critical review according to the criteria listed below, with acceptance standards similar to its parent journal, *Optica. Optica Quantum* is highly-selective; therefore, ratings of High or Very High are required for acceptance.

Appropriateness for Optica Quantum

To warrant publication in *Optica Quantum*, articles must be of sufficient interest to the broader QIST scientific community that they merit rapid publication and wide dissemination. Does the work justify the exposure that being featured in a venue such as *Optica Quantum* will provide? Papers considered incremental, incomplete, or lacking in scientific/technical relevance will be declined. Reviewers should consider whether the subject material falls within the scope of the journal. Is the paper an original and significant contribution to the field? Are the conclusions supported by the data presented? Is the work placed in proper context, i.e., is prior or related work adequately referenced? If the manuscript is a review, does it provide an unbiased overview of a recent advance and not just a summary of the authors' work? *Rating Options: Very high, High, Moderate, Low*

Overall Impact

How likely is this paper to make a major impact on the broader QIST community? Papers with a major impact are expected to be highly cited and may have the potential to transform a field by changing the way others think about a topic or the way they go about their research. Such papers may open up a new area of research and have the potential to be used by the community years or decades into the future. They can make an impact through novel results, through enabling new applications, by solving important problems, by presenting critical data, measurements or characterization, by providing new theoretical insights, or by presenting clear methods, procedures, or reviews that enable other scientist and engineers to further their research and/or develop new applications, instruments, or devices.

Reviewers are asked to rate the overall impact of submitted papers—assuming appropriate revisions are made, if requested.

Rating Options: Very high, High, Moderate, Low

Quality of Presentation

Is the title accurate and does it clearly identify the subject matter? Is the abstract succinct and comprehensible to a non-specialist? Is the manuscript clearly written and logically organized? Are figures and tables understandable and readable as submitted, including all captions and labels? Is the quality of English language usage and grammar appropriate for an archival journal? *Rating Options: Very high, High, Moderate, Low*

Appropriateness of Supplementary Material

Visualizations (videos, 2D images, 3D images), tabular data, or citations to datasets in external repositories should be integral to understanding the article and support the results reported. Custom code and design files are acceptable to include as additional information, which is helpful to readers.

A <u>Supplemental Document</u> (PDF) may provide expanded descriptions of materials and methods.

- Is the supplementary material openly accessible, understandable, and readable?
- Does the supplementary material contribute to presentation of the results?
- If a Supplemental Document (PDF) is included, is the information useful and worthwhile for the reader?

• Is the manuscript coherent without the supplemental PDF file?

Rating Options: High, Moderate, Low, Not Applicable