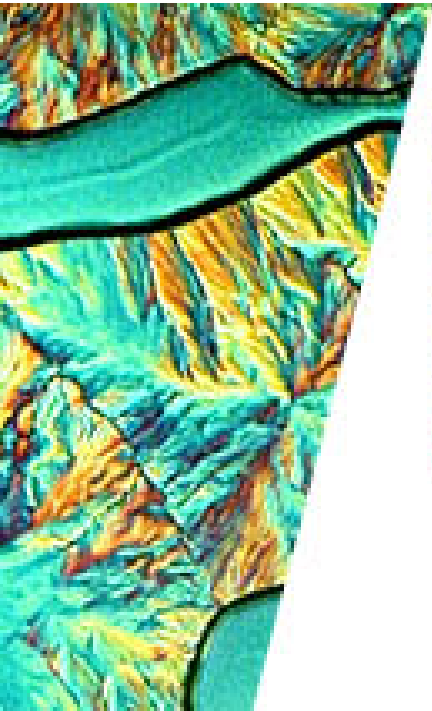


# The OSA Display Fundamental Laser Sciences Technical Group Welcomes You!



PEER REVIEW MATTERS:  
UNDERSTANDING THE PEER REVIEW  
PROCESS AND HOW TO WRITE AN  
EFFECTIVE REVIEW

12 June 2019 • 13:00 EDT

**OSA** Fundamental  
Laser Sciences  
Technical Group

# Technical Group Leadership 2019



**Jonathan Evans**

Chair

Air Force Research Laboratory, USA



**Robert Murray**

Vice Chair

Imperial College London, UK



**{TBD}**

Webinar Officer

Seeking Candidates



**Saima Husaini**

Events Office

LGS Innovations, USA



**Darryl Naidoo**

Social Media and Web Officer

CSIR - NLC, South Africa

# Technical Group at a Glance

- Focus

- Fundamental Laser Sciences
- Novel types of lasers: expanded spectral coverage, new laser materials.
- Exotic resonators and beam control techniques.

- Mission

- To benefit *YOU* and to strengthen *OUR* community
- Webinars, podcasts, publications, technical events, business events, outreach
- Interested in presenting your research? Have ideas for TG events? Contact us at [TGactivities@osa.org](mailto:TGactivities@osa.org).

- Find us here

- Website: [www.osa.org/OF](http://www.osa.org/OF)
- LinkedIn: <https://www.linkedin.com/groups/Fundamental-Laser-Sciences-Technical-Group-8302209/about>

# Today's Webinar

## *Peer Review Matters!*



## **Dr. Ken Schepler**

Research Professor

CREOL, University of Central Florida, USA

*[schepler@creol.ucf.edu](mailto:schepler@creol.ucf.edu)*

### **Speaker's Bio:**

Kenneth L. Schepler commissioned as a 2nd Lieutenant in the US Air Force after receiving his BS in physics from Michigan State University in 1971. He earned his MS and PhD from The University of Michigan. In 1981 he joined the Air Force Research Laboratory at Wright-Patterson Air Force Base, Ohio and served there as a research physicist for over 32 years. He retired in January 2014 and is now a Research Professor at CREOL. His interests include solid state laser physics, laser materials spectroscopy, and nonlinear frequency conversion. Dr. Schepler is a Fellow of the Optical Society of America and a Fellow of the Air Force Research Laboratory.

# Peer Review Matters:

## Understanding the peer review process and how to write an effective review

Webcast  
12 June 2019

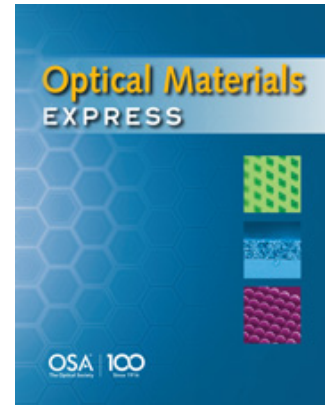
*Kenneth L Schepler, PhD*

Associate Editor, Optical Materials Express  
CREOL, The College of Optics & Photonics  
University of Central Florida



# Who am I?

- PhD in physics at the University of Michigan, 1975
- 32 years at the Air Force Research Lab, Wright-Patterson AFB OH USA
- 5 years at CREOL, The College of Optics & Photonics University of Central Florida
- Associate Editor with Optical Materials Express
- Interests:
  - Transition-metal solid-state lasers ( $\text{Cr}^{2+}$ ,  $\text{Fe}^{2+}$ )
  - Mid-IR nonlinear frequency conversion
  - Mid-IR applications





# PEER REVIEW MATTERS

# Why Does Peer Review Matter?

It's old fashioned

It's flawed

It's hard to do

It's time consuming



# Peer Review, when done right...

Distinguishes facts from opinion

Comments on originality, correctness, importance

Improves both the science and the paper

Ensures dissemination of high quality, original work for others to build upon

Is a necessary part of scholarly communication

# And...

**The peer review process is an increasingly important way for the general public to understand how scientific information is validated**



# Who is helped by Peer Review?

The author

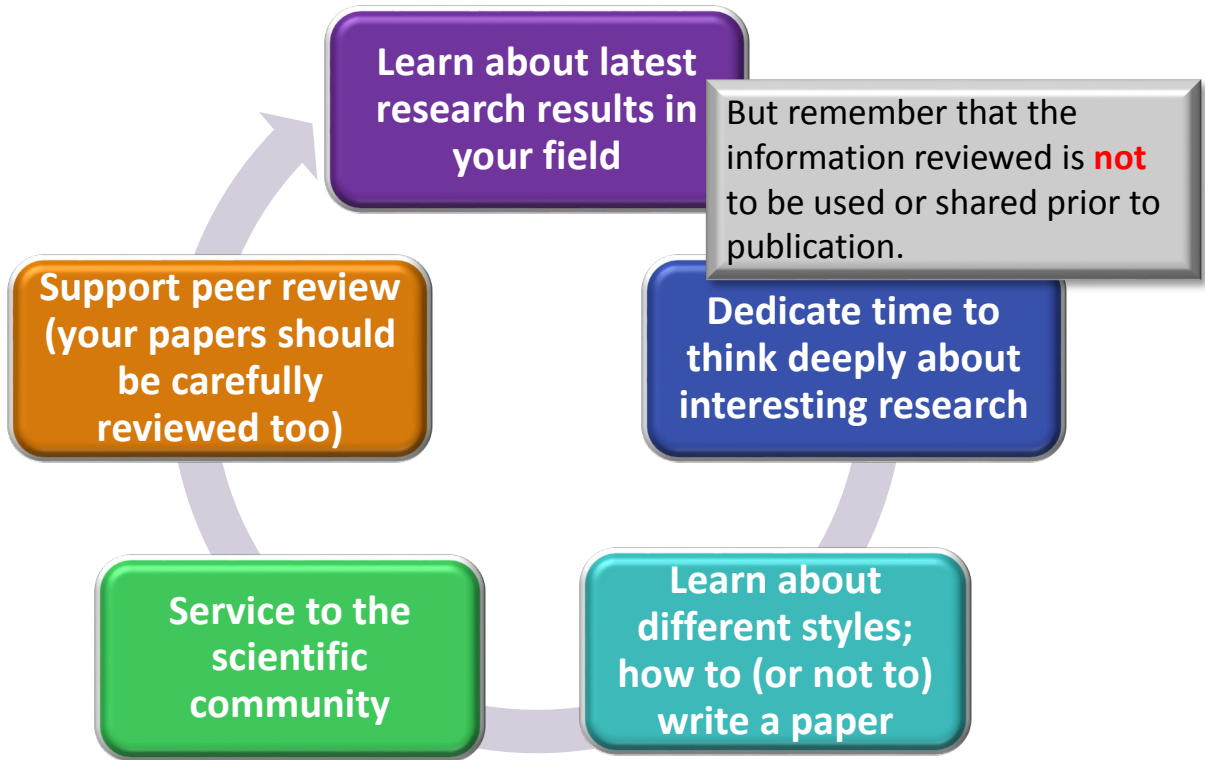
The journal editor

The journal

The scientific community

You, the reviewer

# Why become a reviewer?



# BECOMING A REVIEWER

# Who can become a reviewer?

- Anyone with technical knowledge
- Graduate students, post-docs, early-career researchers, senior-level researchers, technical managers...

# Who should become a reviewer?

- Anyone who publishes in the technical literature
- Graduate students, post-docs, early-career researchers, senior-level researchers, technical managers...

# How do you become a reviewer?

An Editor (like me) requests it

OSA author  
database

OSA member  
profile

Manuscript  
references

Publication  
record; stature





# REVIEWING PROCESS

# When should you accept a review request?

**Always**

(just kidding!)



If you must decline, suggest other reviewers

# What the Editor wants

1. English quality decision
2. A detailed review
  - Enough detail so the Editor can make a decision
  - Comments support your recommendation
3. Clear requirements about revisions needed

# Reviewing Process

1. Review the journal's guidelines
2. Address the specific guidelines in your review comments
3. Ensure ratings, recommendations, etc. in the feedback form are consistent with your written comments

# Author & Reviewer Resource Center

[Submit a Paper](#) ▾

[Manuscript Preparation](#) ▾

[Peer Review](#) ▲

[Overview of Peer Review Process](#)
[Journal Review Criteria](#)
[Become a Reviewer](#)
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## Journal Review Criteria

To be accepted for publication in an OSA journal, manuscripts must meet the high quality standards that have been established for reporting original results of interest to the optics and photonics community. After an initial screening by the editors, external reviewers are asked to judge manuscripts based on the criteria described below.

Journal	Research Article/Letter	Mini-Review/Review	Tutorial	Discussion	Engineering and Lab Notes	Comments and Replies
Advances in Optics and Photonics	X	<a href="#">View</a>	<a href="#">View</a>	X	X	<a href="#">View</a>
Applied Optics	<a href="#">View</a>	<a href="#">View</a>	X	X	<a href="#">View</a>	<a href="#">View</a>
Biomedical Optics Express	<a href="#">View</a>	<a href="#">View</a>	X	X	X	<a href="#">View</a>
JOCN	<a href="#">View</a>	<a href="#">View</a>	X	X	X	<a href="#">View</a>
JOSA A	<a href="#">View</a>	<a href="#">View</a>	<a href="#">View</a>	<a href="#">View</a>	X	<a href="#">View</a>
JOSA B	<a href="#">View</a>	<a href="#">View</a>	X	X	X	<a href="#">View</a>

# ***Optical Materials Express* Review Criteria**

(June 2014)

*Optical Materials Express* publishes manuscripts in which the optical or photonic properties of materials and devices are related to other materials properties. Manuscript submissions addressing experiment, theory, modeling and simulation are welcomed. Manuscripts must describe work that makes significant advances or novel contributions to the field. Although rapid publication is important to *Optical Materials Express*, it is not a letters journal, and the need for urgent dissemination of results is not a requirement for acceptance.

To meet *Optical Materials Express's* goal of providing timely and newsworthy research, we ask that you complete your review within 14 days, if possible. Please base your review on the following criteria: Appropriateness, quality of technical content, significance, and presentation. Definitions of the criteria are given below. If revisions are required to meet the criteria please specify such revisions in your review report.

## ***Appropriateness for Optical Materials Express***

Does the subject material fall within the scope of the journal? Are the results related to optics or photonics in which optical or photonic properties are correlated with other materials properties? Will the paper be of interest to the optical materials community?

***Rating Options: High, Moderate, Low***

## ***Quality, Depth, and Completeness of Technical Content***

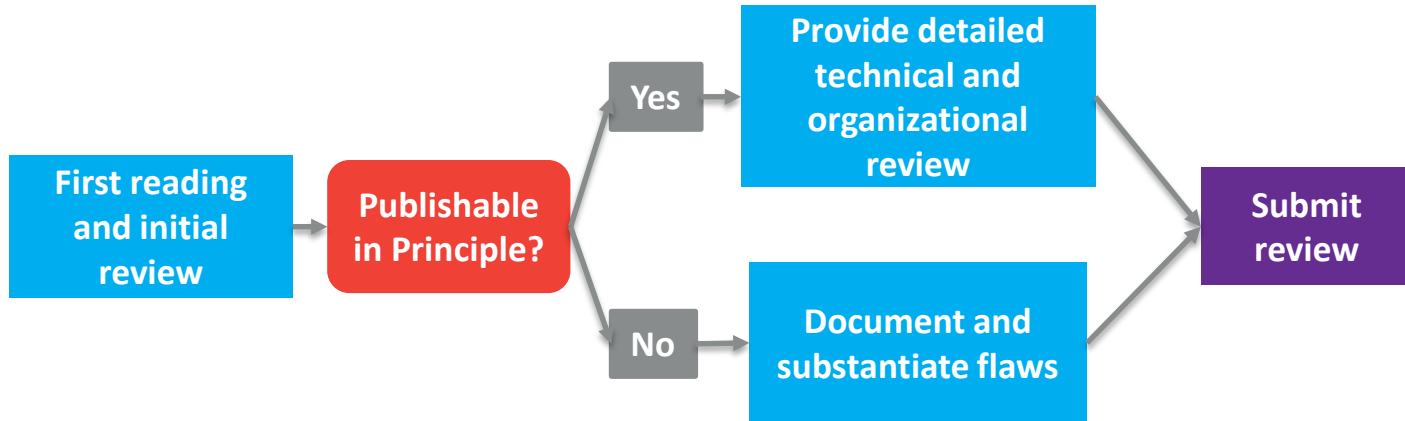
Are the results significant and novel to the field and/or offer interdisciplinary application? Are the conclusions supported by the data presented? Is the work placed in proper context? Are related works adequately referenced? Does the work warrant publication in an archival journal? Note that the need for urgent dissemination of the results is not a requirement for acceptance.

***Rating Options: Very high, High, Moderate, Low, Very low***

## ***Significance***

Reviewers are asked to rate the overall significance of submitted papers—assuming appropriate revisions are made, if requested. Does the manuscript report important new findings? How likely is this paper to make a major impact on the research field covered? Papers with a major impact are expected to be highly cited, but papers can also make an impact by presenting novel results, enabling new applications, solving important problems, providing

# Initial Review



- ✓ Skim the manuscript
- ✓ Summarize the research question

# Initial Review: Considerations

Is the English understandable?

Appropriate for this journal?

Original?  
Innovative?

Reasonable approach?

Sufficient technical content?

Interesting and important?

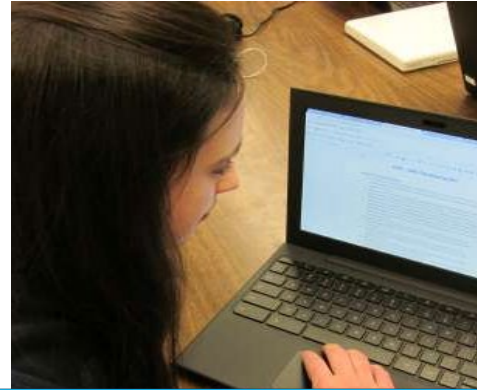
Conclusions supported?



# Detailed Review

Objective assessment of:

- Assumptions, methods
- Underlying theoretical frameworks
- Conclusions, support given
- Manuscript organization, logical flow

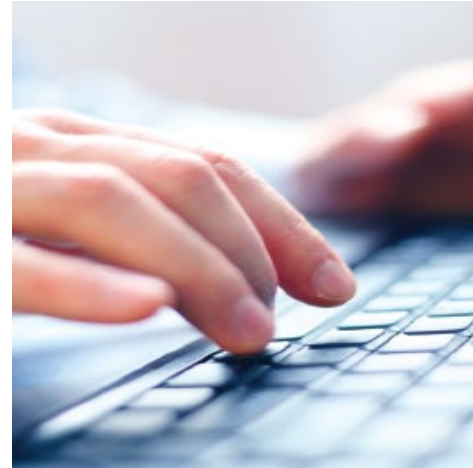


If you, the reviewer, can't follow the authors' logic or steps used to reach conclusions, point it out. Clarifications will help make the paper much more readable and understandable.

**Are necessary references, data, context provided?**

# Detailed Review

- Summarize the results in your own words (optional)
- Include positive and negative aspects
- Avoid harsh or insulting language
- Offer concrete, actionable ways to address problems



**Peer Review should lead to an improved manuscript**

# Organizing Your Review

Organize your points clearly and logically

Use separate paragraphs or numbered comments

Be specific about action(s) needed

Explain your recommendations

## Critiques:

1. The title and motivation of the paper emphasizes imaging respiratory cilia. **Yet, the images in Fig. 5 are not convincing** in this regard. **What would be convincing** is showing a movie or a speckle fluctuation overlay... If this data is not available, I believe that **they can still make a convincing article** for publication based on respiratory tract imaging without emphasizing the cilia...
3. This article suffers from a lot of **self-citation** (maybe **only 3 of 17 citations from those outside** of this author pool or their close associates). While the group has clearly spearheaded a lot of the previous work...



The manuscript presents a practical threshold-selection example for fish counting, but it's of little technologic significance. Besides, the quality of the manuscript needs significant improvement.

**Recommendations without justification are not useful reviews—don't waste the editor's time or yours**

# Organizing Your Review

Possible recommendations to the editor



**Accept**

**Provisional  
acceptance**

**Major  
revision  
required**

**Reject**

# Reviewer Do-s and Don't-s

- ✓ Do distinguish between suggestions and required fixes
- ✗ Don't just repeat the abstract
- ✓ Do provide constructive feedback
- ✗ Don't attack the authors
- ✓ Do respond quickly to review requests (a no is better than no response)
- ✓ Do include justification with your evaluations/recommendations

<https://prism.osapublishing.org/Reviewer>

## **Your Review Moves Research Forward**

### **Welcome to Prism**

When you review a manuscript in Prism, you provide a valuable service the community by ensuring that high-quality, original research and information is published and made available for years to come.

Giving authors constructive, peer-based feedback often results in substantial improvements to their papers, which gives readers a stronger foundation to build upon for future innovations.

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### **Before You Get Started**

Ready to submit your manuscript? Here is what you need to complete the process:

#### **A. Review the journal criteria**

- 1.-Your review should address criteria unique to each journal
- 2.-Your ratings, comments and recommendations should support and affirm your peer-review narrative

#### **B. Other resources for reviewers**

- 1.-[View OSA's ethical guidelines for publishing >>](#)
- 2.-[View OSA's journal descriptions >>](#)
- 3.-[View OPN article, "Why Peer Review Matters" >>](#)



# ETHICAL CONSIDERATIONS



# Ethical Considerations



1. Relationships could bias judgment
2. Be sensitive to real or potential commercial, competitive conflicts
3. When in doubt, inform editor
4. Reviewers should not become co-authors on manuscripts

# Ethical Considerations



5. Do not reveal your identity to the authors
6. Do not initiate work on same problem as manuscript
7. Do not use or disseminate unpublished information
8. Keep manuscripts confidential

# Other Considerations

You may recommend rejection if the English is too poor

<https://languageediting.osa.org>

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**Basic Editing Service**

This is a basic proofreading service, which includes checking for:

- ▶ Grammar
- ▶ Punctuation
- ▶ Typographical errors & spelling
- ▶ Consistency in terminology and style
- ▶ American vs. British usage

**Standard Editing Service**

Each document is edited by two editors – a subject area expert and a language expert. In addition to all proofreading corrections, standard editing checks:

- ▶ Sentence construction
- ▶ Terminology usage
- ▶ Word choice
- ▶ Unclear text

**Premium Editing Service**

This service will improve every aspect of your manuscript. It includes all aspects of standard editing plus:

- ▶ Content check for logic, flow, and structure
- ▶ Cover letter for journal submission
- ▶ Free multiple-round editing (MRE)
- ▶ Editor's report
- ▶ Document scorecard

Benefits of OSA's English Language Editing Service

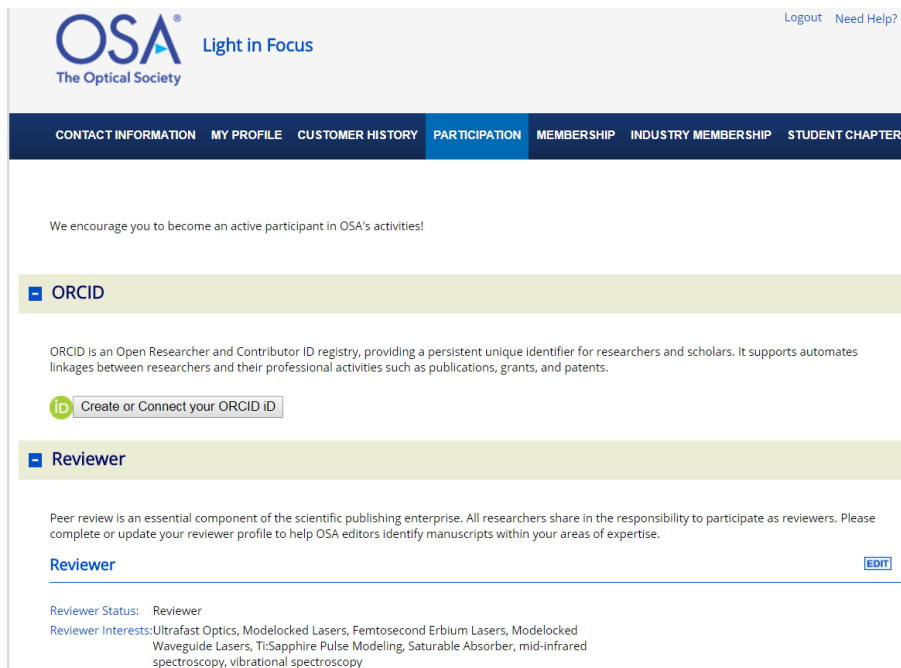
OSA offers English language editing services to researchers worldwide. Our professional editors combine expert subject knowledge with strong English writing and editing skills to offer a full range of services to meet authors' publication needs.

We offer expert professional editing with specialized teams for handling documents in Optics and Photonics. With OSA's comprehensive quality guarantee, you can be assured that you will receive edits of the highest quality. Our language editing options include:

# Other Considerations

Keep your OSA  
profile up-to-date

<https://account.osa.org>




The screenshot shows the OSA website interface. At the top left is the OSA logo with the tagline 'Light in Focus' and 'The Optical Society'. At the top right are links for 'Logout' and 'Need Help?'. Below the header is a dark navigation bar with menu items: 'CONTACT INFORMATION', 'MY PROFILE', 'CUSTOMER HISTORY', 'PARTICIPATION' (highlighted in blue), 'MEMBERSHIP', 'INDUSTRY MEMBERSHIP', and 'STUDENT CHAPTER'. The main content area has a light green background and contains the following text:

We encourage you to become an active participant in OSA's activities!

**ORCID**

ORCID is an Open Researcher and Contributor ID registry, providing a persistent unique identifier for researchers and scholars. It supports automates linkages between researchers and their professional activities such as publications, grants, and patents.

 Create or Connect your ORCID ID

**Reviewer**

Peer review is an essential component of the scientific publishing enterprise. All researchers share in the responsibility to participate as reviewers. Please complete or update your reviewer profile to help OSA editors identify manuscripts within your areas of expertise.

**Reviewer** [EDIT](#)

Reviewer Status: Reviewer

Reviewer Interests: Ultrafast Optics, Modelocked Lasers, Femtosecond Erbium Lasers, Modelocked Waveguide Lasers, Ti:Sapphire Pulse Modeling, Saturable Absorber, mid-infrared spectroscopy, vibrational spectroscopy

# Other Considerations



**Review two  
manuscripts for each  
paper you submit**

**OSA annual Outstanding Reviewer Recognition  
eligible after 8+ reviews  
nominated by OSA Editors**

**Are you a reviewer yet?**

# Resources



## OSA Publishing

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### Author & Reviewer Resource Center

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#### Overview of Peer Review Process

[Information for Authors](#)  
[Peer Review Process Step-by-Step](#)  
[Journal Review Criteria](#)  
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Manuscripts must meet the high quality standards that have been established for OSA journals, results of interest to the optics and photonics community. Review by external referees is required for

*Thank you!*

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100  
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DISCUSSION & QUESTIONS