Editorial Applied Physics B; Lasers and Optics Summer 2019

Dieter Meschede¹

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Dear Readers and Authors of our journal Applied Physics B: Laser and Optics,

I am writing to you to comment on the policy of our journal in times of rapidly changing publication structures. Our journal *Applied Physics B* has been in existence in some guise for more than 45 years and has long been a prime target for novel results especially with respect to lasers and their wide applications. Highlights include the original publication on the disc laser [1], the proposal of the ground-state depletion microscopy technique [2], and the so-called Pound Drever Hall frequency stabilization scheme [3] which is today used in almost every laboratory for laser spectroscopy, as well as a widely used method for ultrashort pulse creation [4, 5].

Changes are not only caused by scientific currents shifting towards newly upcoming topics, but also by the rapid growth of scientific laboratories around the world seeking their share of publications. Since about 20 years, we witness rapid and ongoing change in the scientific publishing industry, and the emergence of digital publication has presented both immense opportunities and new challenges. As the number of new journals continues to increase, and it becomes more difficult to distinguish credible journals from those with questionable quality standards, we must adapt to safeguard the reputation of established and reputable publications.

Applied Physics B must of course take part in these evolutions. While our journal processes are technically up-to-date—with about 40 days from submission to first decision on average and about 10 days from acceptance to online publication—it is also most important that we secure the highest quality standards. For our journal, we are striving for this goal with these guidelines:

- The first guideline is: the content of our journal is shaped by the expertise of prominent and experienced scientists who do their best to create a high-quality journal for both scientific authors and readers. All members of our editorial board are widely networked within their respective communities, which contributes strongly to the standing of our journal.
- Our guidelines for accepting articles submitted to our journal—based on independent reviewers' reports—are:
 - (1) Is the manuscript in line with the target of our journal? Applied Physics B publishes novel results with respect to lasers and their applications with an emphasis on obtaining new insight into physical devices and phenomena. This may range from fundamental questions in photonics, quantum optics, or laser physics to direct applications. We also publish theoretical work, where it is important that an impact on experimental progress is likely.
 - (2) Is the material presented sufficiently novel and presented in a transparent way? Authors have to remember that publishing means communicating, and hence clear documentation defining the relevance of the material in its field as well as the new physical insight obtained is essential.
 - (3) On novelty: our journal has “archival” character, i.e., we are expecting that reports on novel results are presented with good maturity with respect to insight and interpretation. In addition, and for good scientific practice, we encourage authors to also submit well worked out and matured accounts of material which otherwise may be lost in “supplementary materials”—an unsettling practice in recent times.

✉ Dieter Meschede
meschede@iap.uni-bonn.de

¹ Institut für Angewandte Physik, Universität Bonn,
Wegelerstr. 8, 53115 Bonn, Germany

With these ambitions, we believe that we will maintain a **high-quality scientific journal led by scientists for scientists** in a rapidly changing scientific world. We invite you to submit your results in our field—lasers and optics—and find out what your peers have published in our journal. In

addition, we encourage you to submit ideas for topical issues designed to collect publications on upcoming subjects in a visible journal.

Dieter Meschede
Editor-in-Chief

References

1. A. Giesen et al., Scalable concept for diode-pumped high-power solid-state lasers. *Appl. Phys. B* **58**, 363 (1994)
2. S.W. Hell, M. Kroug, Ground-state-depletion fluorescence microscopy: a concept for breaking the diffraction resolution limit (PDF). *Appl. Phys. B Lasers Opt.* **60**(5), 495–497 (1995)
3. R.W.P. Drever, J.L. Hall, F.V. Kowalski, J. Hough, G.M. Ford, A.J. Munley, H. Ward, Laser phase and frequency stabilization using an optical resonator (PDF). *Appl. Phys. B* **31**(2), 97–105 (1983)
4. U. Keller, H.R. Telle, G. Steinmeyer, A.E. Dunlop, J. Stenger, D.H. Sutter, Carrier-envelope offset phase control: A novel concept for absolute optical frequency measurement and ultrashort pulse generation. *Appl. Phys. B* **69**, 327–332 (1999)
5. U. Keller, Ultrafast solid-state laser oscillators: a success story for the last 20 years with no end in sight. *Appl. Phys. B* **100**, 15–28 (2010)

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