Dear Colleague,

Energy scaling with high average power has become increasingly important in pursuing extreme-light conditions. Technological advances in cooling gain media to cryogenic temperatures are enabling next generation laser systems yielding a wide variety of scientific and industrial applications. Extended operating regimes, using new and traditional gain media, are being explored for tailored light-matter interactions with ever greater efficacy.

This topical issue is dedicated to developments at the frontiers of cryogenically-cooled laser technology, ranging from the continuous-wave to the ultrafast femtosecond domain, including their applications across all the physical sciences.

Topics of interest include, but are not limited to:

• Developments in average- and peak-powers
• Novel concepts in laser and amplifier architectures
• New spectral regimes including subsequent nonlinear conversion
• Advanced cryo-coolers for laser systems and thermal engineering for high-power
• Materials properties investigations in the cryogenic regime
• Applications of cryogenically-cooled lasers

We cordially invite you to contribute to this topical issue, by submitting your manuscript containing new, high quality, and unpublished material before

   October 31, 2019

Both reviews and original research articles will be published. All manuscripts will be subject to a standard review procedure with respect to their degree of novelty, relevance, and quality of presentation. Immediate and speedy reviewing is supported by online submission at

https://www.editorialmanager.com/aphb/.

Manuscripts will be published within 2 weeks after acceptance.

Looking forward to receiving your contribution.

Sincerely

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