

EDITORIAL

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Editorial

Stefan W Hell*

Dear Reader,

Welcome to the first issue of **Optical Nanoscopy**. Not long ago, only a few would have bet on this transformation of optical microscopy resolution that we are currently witnessing. The diffraction resolution barrier of a lens-based microscope had been accepted for over a century and only efforts of the past two decades have demonstrated that it was not to be written in stone - at least not for the important fluorescence contrast mode. A dream for generations of scientists, imaging with nanoscale resolution with good-old lenses has become a fact.

In the last few years, the field of superresolution fluorescence microscopy or far-field optical nanoscopy has grown tremendously. We have witnessed various, less or more related strategies for superresolution fluorescence imaging, almost each one accompanied by the introduction of a new acronym. The number of publications in this field has also grown exponentially; they are distributed across many disciplines ranging from physics, chemistry, biology, material and basic medical sciences. While this development clearly testifies to the major impact that this field is now assuming, in my opinion, a journal that mirrors this development in all its aspects and without bias to certain disciplines is missing. Such a journal should well serve both developers and users - briefly all scientists contributing to this field.

Therefore, within the realm of optical microscopy resolution, the journal's scope is essentially 'unlimited'. Concretely, **Optical Nanoscopy** will cover papers dealing with theory, novel concepts, initial implementations, proof-of-principles, concept developments, and applications in various areas of science and technology. Playing a central role in this field, probe chemistry, fluorescent protein mutagenesis, and probe spectroscopy is just as relevant. We particularly welcome studies that cover all these aspects in a single paper, while understanding that this cannot hold for every publication. The journal's scope also encompasses the more established near-field optical techniques. The history of science has repeatedly

shown that in order for a method to become useful, it has to be developed to a level that so its application becomes routine. For this reason, of equal relevance are important advances in known techniques, including the key details that matter in their practical use. In a nutshell, the scope of this new journal is anything that substantially furthers optical imaging with resolution beyond the diffraction limit.

Given the rapid growth of the field, the most important asset of a peer-reviewed journal is speed of publication and a guaranteed fast and unrestricted dissemination of the authors' important results. As an open access peer-reviewed journal, **Optical Nanoscopy** will do its best to publish original papers in less than 6 weeks after initial submission.

The basis for success of **Optical Nanoscopy** is its Editorial Board encompassing more than 35 colleagues from Asia, Europe, and the US, bringing together the needed expertise ranging from physical optics, chemistry, and the life sciences. I look forward to publishing key advancements from the superresolution optical community and their users.

Yours sincerely,

Stefan W. Hell, Editor-in-Chief of Optical Nanoscopy

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