Editorial

This and the next issue of the *Journal of Microscopy* contain papers from the 9th International Conference on Near-Field Optics, Nanophotonics and Related Techniques (NFO-9), which was held at the Swiss Federal Institute of Technology in Lausanne (EPFL), Switzerland, between September 10 and 15, 2006. Well over 350 participants from 26 countries joined us there, on the shore of Lake Geneva, to contribute to an exciting program including 120 oral and 230 poster presentations.

Since its first edition in 1992 in Arc-et-Senans (France), the NFO series of conferences has provided a well-focused forum for discussing near-field microscopy, from the most fundamental principles to the numerous applications in physics, chemistry, life science, information technology, environmental and materials sciences.

The ninth edition of the conference and this themed issue of the *Journal of Microscopy* demonstrate the maturity of this field of research. Several topics are particularly well represented: plasmonics, spectroscopy, quantum systems and optical antennae. This last field of research sheds new light on nanophotonics at the frontier between optics and microwaves; it is also closely related to the fast growing domain of optical metamaterials. The near-field optics spectrum is also definitely broadening, with many interesting new applications in the

infrared and even Terahertz domains. Several contributions are related to nanophotonic circuits and components, showing just how close concrete applications and systems are coming.

Near-field microscopy and related techniques are essential for these new developments. It is only by probing and measuring in a quantitative manner what cannot be observed in the far field that new physics will be uncovered and innovative devices conceived.

The response to this themed issue has been rather overwhelming, with a lot of very high-quality contributions. I would like to take this opportunity to thank the staff of the *Journal of Microscopy* for their outstanding support and their forbearance during the peer review process; the NFO-9 Advisory and Programme Committees for putting together an exciting conference programme; and all the collaborators of the Nanophotonics & Metrology Laboratory at EPFL for making NFO-9 a success!

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