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Editorial



NICOLAS BONOD
Editor-in-Chief

Light, Everywhere, Every Time!

Light was everywhere during the announcement of the 2023 Nobel Prizes in Physics and Chemistry on October 3rd and 4th, honoring pioneering works in generating attosecond pulses and synthesizing quantum dots. To celebrate these Nobel Prizes and honor their laureates, this issue features two articles dedicated to these outstanding achievements in Physics and Chemistry. The 2023 awardees consolidate an impressive series of Nobel prizes based on light science and technologies, further highlighting how Light is a fertile topic and its interaction with matter a source of major scientific breakthroughs.

Nonlinear optics is an essential part of this exciting domain of light-matter interactions. It took only a few months after the development of lasers for the first works on nonlinear optics to emerge. It was reported as early as 1961 how a second harmonic signal in the UV spectrum can be generated by focusing a ruby laser beam onto a quartz crystal. Since these pioneering works, nonlinear optics has evolved into a cornerstone of photonics. Nonlinear optics is ubiquitous in photonic technologies, from laser chains to optical fibers and integrated circuits, to generate light sources with increasingly rich spectra and finer temporal responses. This special feature proposes no less than four articles dedicated to the latest advances in

nonlinear optics, covering areas from temporal Kerr cavity solitons, Parametric Nonlinear Optics to integrated photonics on silicon nitride or patterned gallium phosphide technology.

It also only took a short time for mode-locking to be proposed after the advent of lasers, notably through the pioneering works from Bell labs published as early as 1964. Delve into this key concept in optics for generating ultrashort light pulses in the 'Back to Basics' section with the article 'Mode-locking of Lasers.' Another major outcome in nonlinear optics was the discovery of optical solitons. To celebrate the fiftieth anniversary of this discovery, this issue includes an article on the history of solitons in optical fibers, from 1973 to nowadays.

The advent of lasers propelled optics into a new era. But far from waning, the scientific and technological fields of optics and photonics continue to witness an intensified growth. At every meeting, exhibition, and conference, we can feel a strong dynamism and enthusiasm among photonics stakeholders. Let us communicate our passion and enthusiasm to students and younger generations, so that they have the opportunity to be trained in this fascinating science and to contribute in turn to advancing knowledge and broadening applicative domains in order to bring Light, Everywhere, Every Time!

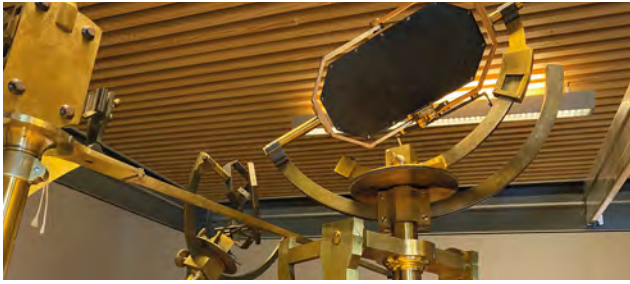
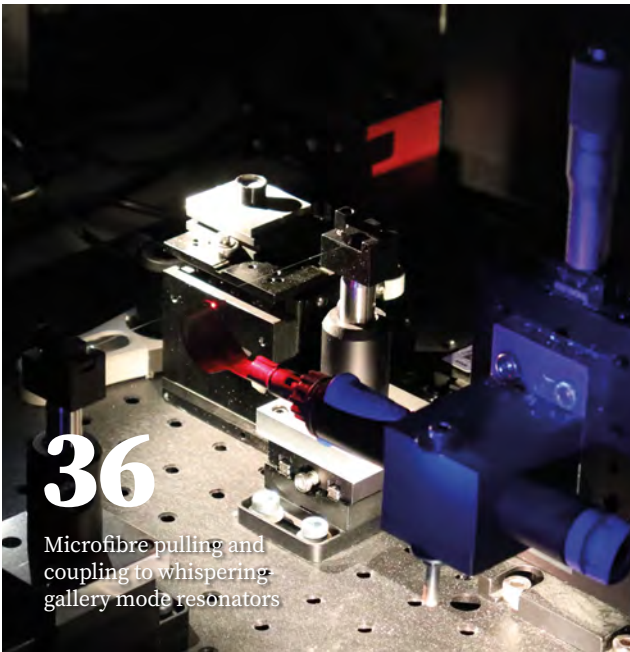


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SFO/EOS forewords



ARIEL LEVENSON

President of the French Optical Society

We are such stuff as dreams, and our history, are made!

This editorial had been completed when I learned with photonic joy that the 2023 Nobel Prize in Physics had been awarded to Pierre Agostini, Anne L'Huillier and Ferenc Krausz for the adventure of tiny temporal, attoseconds, light pulses, and in chemistry to Mounji Bawendi, Louis Brus and Alexei Ekimov for the adventure of tiny light emitters, controlled by quantum confinement. Congratulations to the Nobel Prize winners with a special thought for Anne and Pierre.

As many of you will already know, the EOSAM was held in Dijon, and this year saw a new model of collaboration with a national member society, our SFO. I would like to warmly thank EOS's Presidents, Patricia Segonds, Gilles Pauliat and Emiliano Descrovi for their trust and confidence. Beyond the impressive numbers, I especially appreciated the quality of scientific exchanges. Hats off to the General Chairs, Bertrand Kibler and Guy Millot (ICB) - the success of EOSAM 2023 owes a lot to them. The distinction of our colleague Sébastien Tanzilli (INPHYNI), as EOS Fellow was also a great moment.

In the context of our 40th anniversary we publically launch the PÉPITES project. A program dear to my heart devoted to the preservation of the memory of our rich and diverse community. You can learn more in the article in this issue co-authored with John Dudley (FEMTO-ST). PÉPITES began in a moving way during the Gala dinner in Dijon, where we brought together SFO historical personalities. It was a very touching moment and showed our commitment to continue our service to the optical and photonic community.

2024 is also going to be a rich year. We look forward to seeing you in July at our major event, OPTIQUE Normandie.

Photoniqument vôtre
Ariel Levenson,
President of SFO
Directeur de recherche CNRS



PATRICIA SEGONDS

President of the European Optical Society

A very successful EOSAM 2023 organized with SFO

On behalf of the Board of Directors of the European Optical Society, EOS, I would like to acknowledge Ariel Levenson, President of the SFO, the French Branch of EOS, for his strong support to the organization of the EOS Annual Meeting. Thanks to two exceptional general chairs, Bertrand Kibler and Guy Millot, EOSAM 2023 turned out to be a fantastic moment to exchange results and ideas and catch up with international colleagues. EOSAM is the ideal framework for researchers aiming at a comprehensive overview of the latest results in different fields of optics and photonics, as presented within many Topical Meetings (TOM). Excellent Plenaries, Focused Sessions, Tutorials and Industrial Sessions completed the high-quality dissemination offer.

Over 500 participants could attend the conference in Dijon in beautiful Burgundy. Traditional meals with local wine, cheese and croissants made lunch and coffee breaks enjoyable. The conference dinner provided a friendly atmosphere with a fantastic music group for entertainment. To follow up with some of the latest findings presented at EOSAM 2023, a topical issue has been launched in our open access Journal of the European Optical Society, JEOS:RP. Extended papers covering both fundamental and applied topics are welcome for submission. They will have to add a significant extra value to the conference proceedings, and will be subject to the standard peer review processes as for regular JEOS:RP articles. JEOS:RP publications are indexed in major databases. Acceptance times are short and authors retain copyright. EOS members benefit from significant discounts on APCs.

In 2024, EOSAM will be held in Napoli between 9 and 13 September 2024! It will be organized with the Società Italiana di Ottica e Fotonica, SIOF, the Italian branch of EOS. Visit <https://www.europeanoptics.org/> to discover all the benefits EOS offers and how to strengthen your relationships with your peers! Become a member of one of our National Optical Societies and you will be an EOS member.

Patricia SEGONDS, President of EOS
Professor at Grenoble Alpes University



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