

# ANATOLY ZAYATS

Chair in Experimental Physics, Director, London Centre for Nanotechnology,  
King's College London, UK

## Education

PhD in Physics (1989)  
Moscow Institute of Physics and Technology

MSc in Physics with distinction (1986)  
Moscow Institute of Physics and Technology

## Technical Activities/Interests

- Nanophotonics, metamaterials, plasmonics
- Nonlinear and ultrafast optics
- Complex vector beams, optical spin-orbit coupling, topological photonics
- Optical properties of nanostructures, nanoparticles and thin films

## Services to the Technical Community

- EPSRC Physical Sciences Strategic Advisory Team (2020–)
- Future Horizons for Photonics Research–2030 and Beyond Roadmap, UK Photonics Leadership Group (2020)
- IoP Photonics Roadmap: The Health of Photonics (2017)
- Advisory Board of the A\*STAR Data Storage Institute, Singapore (2015–2018)
- Nanophotonics Foresight Panel, Nanophotonics Europe Association (2010–2011)
- European Nanophotonics Roadmap: Merging Optics and Nanotechnologies (2006)
- Chair, Royal Society of Chemistry Faraday Discussions on Nanoplasmonics (2015, 2019)
- Chair, Royal Society Discussion Meeting Unifying Physics and Technology in Light of Maxwell's Equations (2015)
- General (2012) and Programme (2011) Chair, OSA Integrated Photonics Research, Silicon and Nanophotonics conference
- General Chair, Nanophotonics and Metamaterials conference, European Optical Society General Assembly (2010, 2012)
- Editorial Board, Laser and Photonics Reviews (Wiley), (2009–)
- Editorial Board, Nanophotonics (De Gruyter), (2011–)
- Editorial Board, Journal of Materials Chemistry (RSC), (2014–)
- Editorial Advisory Board, Applied Metamaterials (EDP), (2013–)
- Editorial Board, Journal of Physics D: Applied Physics (IoP), (2012–2014)
- Associate Editor, Optics Express (OSA), (2010–2012)

## Service to SPIE

- Founding Editor-in-Chief, Advanced Photonics (2019–)
- Founding Editor-in-Chief, Advanced Photonics Nexus (2022–)
- SPIE Board of Editors (2019–)
- Advisor, King's Lions SPIE Student Chapter (2020–)
- SPIE Community Champion (2019, 2020)
- Chair Programme Committees: SPIE Photonics Europe, Metamaterials (2018–); SPIE Optics+Optoelectronics, Nonlinear Optics (2018–)
- Program Committees: SPIE Photonics West, Nanoscience+Engineering (2018–2022); SPIE Photonics Europe, Nanophotonics (2006–); SPIE Nanophotonics Australasia (2017); SPIE Opto-Ireland (2005)

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## **Professional Honors**

- Elected Member of Academia Europaea (2022)
- Humboldt Research Prize (2021)
- Fellowship of the Royal Society of Chemistry (2014)
- Royal Society Wolfson Research Merit Award (2013)
- Fellowship of SPIE (2012)
- Fellowship of the Optical Society of America (2008)
- Fellowship of the Institute of Physics (2006)

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## Election Statement

I feel humbled and proud to have been nominated for the SPIE Board of Directors. SPIE is a global community welcoming everyone working on the science of light. Our community spans academic and industrial sectors and so many diverse application fields. It is vital that all optics professionals, regardless of their background or career stage, feel valued and acknowledged within SPIE. They need to know that they belong here, and that they and their work are recognized and appreciated.

As a society, we must use our scientific expertise and industry insights to play a leading role in advocacy for optical sciences and in defining science policy in all areas of optics and photonics. New challenges are constantly emerging for science, such as in achieving sustainability and net-zero-emission goals, and optics can and must contribute to solving them. SPIE can and should play a leading role in this process.

To achieve this, we must prioritize diversity within our community and support professionals at every stage of their career. Since my first SPIE conference (Photonics West) as a post-doc, I have witnessed how the SPIE community has grown and become ever more and more diverse in terms of scientific interests, affiliations, and background. Given the key role SPIE has played in the development of my own career, I am passionate about supporting the next generation of scientists and engineers. To succeed SPIE must continue to attract growing number of younger colleagues and provide them with the tools and resources they need to succeed. My vision for SPIE is to consolidate and enhance our leadership position by engaging early-career scientists at the very start of their careers and supporting them through a lifelong membership. I would like to see stronger encouragement of early career scientists with especially designed prizes and their greater involvement in the decisions SPIE is making for its future.

SPIE organises the best conferences in the field, but as a serious professional society it also needs strong scientific journals to highlight the advances in our field. When I was asked to help SPIE to develop a new journal, I was hesitant, 'Do we need another journal among the vast number of optics journals already in existence?'. Now, several years later, I am proud to have contributed to establishing a new SPIE journal that has brought SPIE publishing to a new level and become a trusted source of most advanced photonics research and is respected and appreciated by both authors and readers. The Advanced Photonics journal was developed by scientists for scientists, and it underlines an important role professional societies play in scientific publishing. I will work to ensure that our publishing programme remains at the forefront of scientific innovation and grow its impact in the community, with a focus on increasing the accessibility of our journals to all the authors and readers worldwide.

It's my goal to ensure that SPIE continues to grow from strength to strength in every aspect of its activities, advocating for the international advancement of the photonics, actively supporting and encouraging students and young professionals, increasing diversity and representation, and fostering global scientific collaborations, and play defining role in solving the problems faced by our planet. It would be a privilege to serve our diverse and international community. Together, we can shape the future of OUR SPIE.