



NEWS

from the **Science of Light**

Dear ,

Here you can find news about research and people from our institute. This is the first issue of our digital newsletter and therefore takes us a bit further afield. Enjoy reading!

Yours sincerely,

Max Planck Institute for the Science of Light

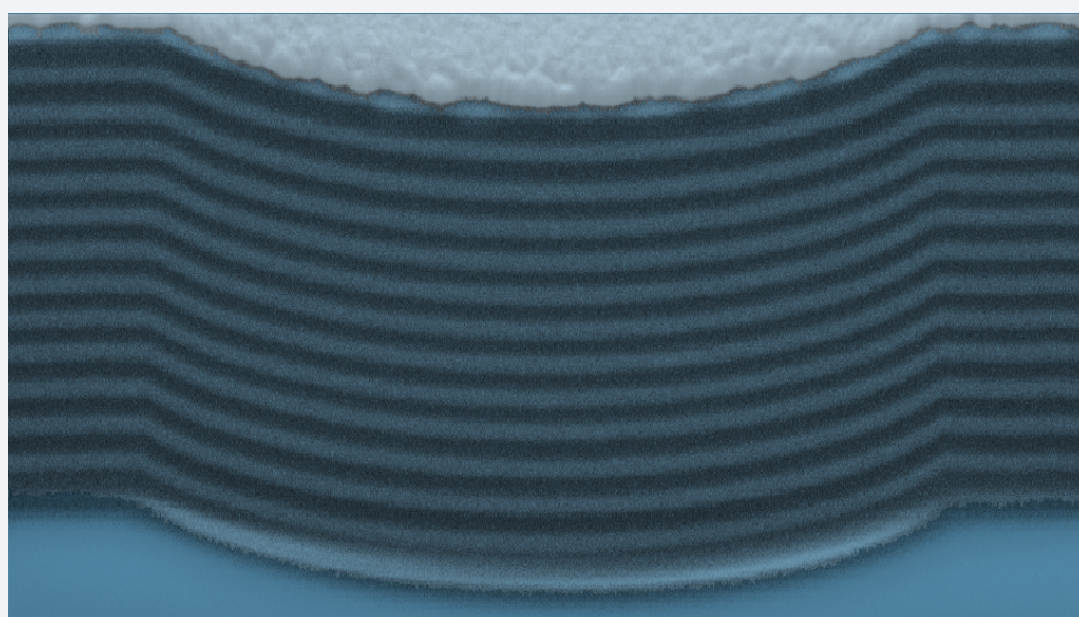
Research

Chip manufacturer ASML partners with MPL

From lab to fab: the Dutch corporation ASML and the Max Planck Institute for the Science of Light (MPL) in Erlangen will explore novel special optical fibres together over the next three years. ASML is a world-leading manufacturer of lithography machines for mass producing microchips. > **MORE**

A new way to control the polarization of light

For quantum communication or optical computing, it is important to measure and to influence in which direction a light wave is oscillating. It is now possible for the first time to manipulate the polarization of a continuous laser wave with a special glass fibre, that has mirrors attached at both ends. > **MORE**

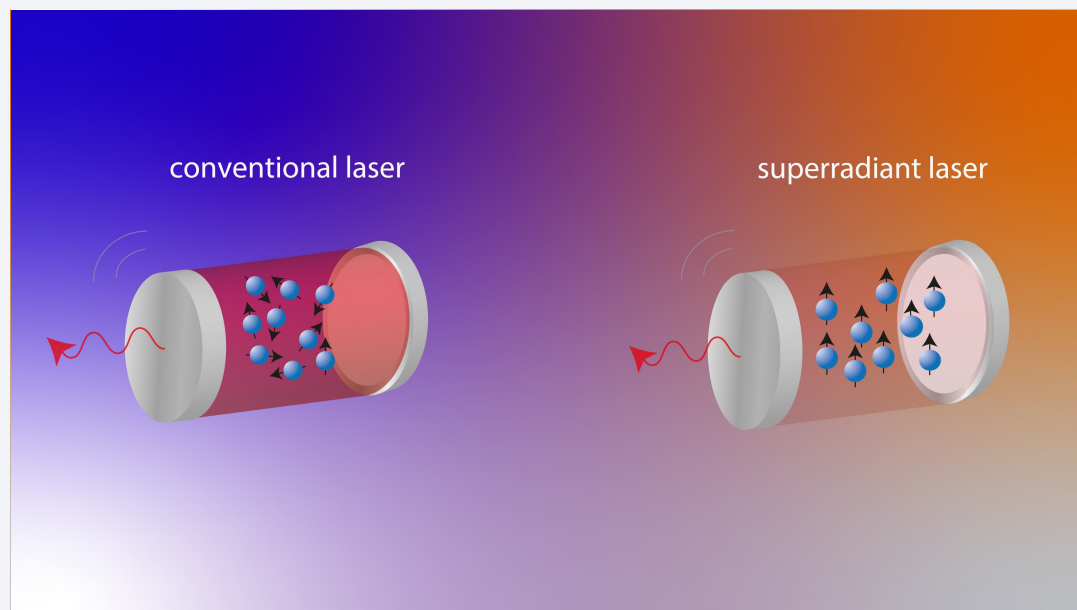


Quantum Valley

Bavaria boosts building quantum computers and invests 300 Million Euros in the newly formed initiative Munich Quantum Valley. One of its goals: The development of a new generation of computers which use quantum technology. Our institute is part of this initiative. > **MORE**

Everything you need to know about Cooperative Quantum Phenomena

The whole is greater than the sum of its parts: This adage is more relevant than ever today at the level of quantum systems. A hands-on tutorial aimed at - not only - young researchers to better understand the research field of cooperative quantum phenomena with a focus on quantum optics, metrology and information. > **MORE**



New microscopy method provides unexpected insights into the inner workings of cells

By combining three imaging methods, scientists at the MPI for the Science of Light in Erlangen and the Center for Molecular and Cellular Bioengineering at Dresden University of Technology have now succeeded in measuring mechanical properties of the cell interior with unprecedented precision. > **MORE**

Light-driven rocket propulsion of microscopic particles in hollow core fibres

Scientists have for the first time accelerated microscopic particles backwards at the speed of sound inside hollow core photonic crystal fibres (PCF). A single laser pulse lasting only a quadrillionth of a second and containing a 90 billionth of the energy needed to boil a kettle, blasts material off the surface of the particle, accelerating it backwards at more than a million times gravity. > **MORE**

Son et lumière in twisted space

Xinglin Zeng, a postdoc in Birgit Stiller's group at our institute, has recently reported the first observation of stimulated Brillouin scattering in the "twisted space" of chiral photonic crystal fibre (PCF). > **MORE**

People

New Research Group Leaders: Flore Kunst and Mario Krenn

Flore Kunst started her research group *Non-Hermitian topological phenomena* in November 2021. She applies the mathematical discipline of topology to describe condensed matter and better understand how its properties change if one allows for dissipative effects. > **MORE**

With his new group *Artificial intelligence*, **Mario Krenn** intends to use AI algorithms as a source of inspiration in quantum physics. His group aims to use AI algorithms to invent new technologies. He started in September 2021 > **MORE**

Gerd Leuchs becomes Vice President of Optica

The membership of Optica, formerly OSA, the leading organization for the advancement of optics and photonics worldwide, has elected Gerd Leuchs, director emeritus at MPL as the society's Vice President, for a 2022 - 2024 term. > **MORE**

MPL Group Leader **Maria Chekhova** and MPL Director **Florian Marquardt** honoured for their contributions to the science of light. > **MORE**



Quote

Gerd Leuchs' groundbreaking work in laser spectroscopy and quantum communication and his extensive knowledge of our organization will be great assets

Optica CEO Elizabeth Rogan

Emmy Noether Travel Grant for Michelle Küppers

Promotion on the way to a leadership position: physicist will attend the University of Oxford. The Emmy Noether Travel Grant of MPL serves to promote the exchange and networking of female researchers in Europe. > **MORE**



Events

Nobel laureate spoke at MPL's Distinguished Lecturer Series

Great honour: MPL was pleased to welcome Nobel Prize Laureate Konstantin Novoselov from the National University of Singapore, one of the discoverers of graphene. Don't want to miss a lecture? Get our DLS-Newsletter and > **SUBSCRIBE HERE**

New Seminar Series: IMPRS Monday Show

The International Max Planck Research School (IMPRS) Physics of Light has successfully launched an event for PhD students > **MORE**





News

- Promotion for MPL research project on long-term effects of COVID-19: Bavaria's Minister of Health Klaus Holetschek supports the project disCOVER in Erlangen with more than 1 Million Euros. MPL's Managing Director Jochen Guck and Postdoc Martin Kräter play a central role in this project > [MORE](#)
- A few months ago, Holetschek visited MPL and was impressed by the great potential of real-time deformability cytometry for the diagnosis of infections such as Covid-19 during a laboratory tour by Jochen Guck. > [MORE](#)
- New scholarship at MPZPM: In memory of the pioneering English chemist Rosalind Franklin, the Max-Planck-Zentrum für Physik und Medizin set up a scientist-in-residence program for excellent researchers. > [MORE](#)
- Four young MPL researchers receive awards: Paul Roth from the Russell emeritus group and Alexander Mikhaylov and Tomás Santiago-Cruz from Maria Chekhova's group recently received awards for their outstanding research at international conferences. Additionally, Luis Morales from the Sandoghdar division received the "PicoQuant Young Investor Award" for his outstanding paper at the BIOS conference > [MORE](#)

Jobs

Looking for a Master degree
or Ph.D. at the forefront of optics?

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