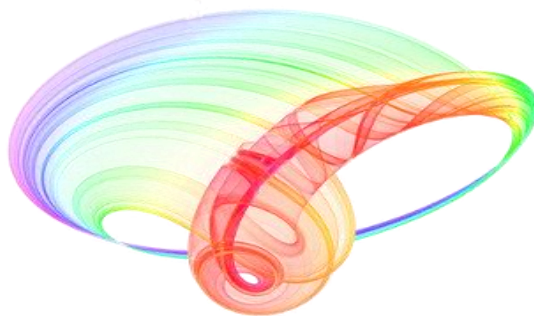


# Programme

&

useful information

VI International School and Conference on Photonics  
**PHOTONICA 2017**



28 August - 1 September 2017  
**Serbian Academy of Sciences and Arts**  
Belgrade, Serbia

## **Conference topics:**

1. Quantum optics and ultracold systems
2. Nonlinear optics
3. Optical materials
4. Biophotonics
5. Devices and components
6. Optical communications
7. Laser spectroscopy and metrology
8. Ultrafast optical phenomena
9. Laser - material interaction
10. Optical metamaterials and plasmonics
11. Other topics in photonics

## Organizing institutions

Institute of Physics Belgrade, University of Belgrade  
Serbian Academy of Sciences and Arts  
Optical Society of Serbia

## Organizing committee

### Institute of Physics Belgrade:

Aleksandar Krmpot (Chair)  
Marina Lekić (Secretary)  
Stanko Nikolić (web master)  
Marko Nikolić  
Vladimir Veljić  
Danica Pavlović

### Serbian Academy of Sciences and Arts:

Biljana Grozdanić  
Aleksandra Hreljac

### PanaComp (technical organizers):

Nikola Kolarov  
Jelica Kurćanski

## Scientific committee

Aleksandar Krmpot, Serbia  
Antun Balaž, Serbia  
Arlene D. Wilson-Gordon, Israel  
Bojan Resan, Switzerland  
Boris Malomed, Israel  
Branislav Jelenković, Serbia  
Dejan Gvozdić, Serbia  
Detlef Kip, Germany  
Dragan Indjin, United Kingdom  
Edik Rafailov, United Kingdom  
Feng Chen, China  
Francesco Cataliotti, Italy  
Giannis Zacharakis, Greece  
Goran Isić, Serbia  
Goran Mašanović, UK  
Isabelle Philippa Staude, Germany  
Jelena Radovanović, Serbia  
Jerker Widengren, Sweden  
Jovana Petrović, Serbia

Laurent Sanchez, France  
Ljupčo Hadžievski, Serbia  
Marco Santagiustina, Italy  
Milan Mašanović, USA  
Milan Trtica, Serbia  
Miloš Živanov, Serbia  
Milutin Stepić, Serbia  
Milivoj Belić, Qatar  
Nikola Stojanović, Germany  
Pavle Andjus, Serbia  
Peđa Mihailović, Serbia  
Radoš Gajić, Serbia  
Schaaf Peter, Germany  
Sergei Turitsyn, UK  
Suzana Petrović, Serbia  
Ticijana Ban, Croatia  
Vladana Vukojević, Sweden  
Zoran Jakšić, Serbia  
Željko Šljivančanin, Serbia

## Contacts:

If you have any enquiries, please contact the PHOTONICA2017 Technical Secretariat at the registration desk. In case of emergency during the conference, the onsite secretariat can be reached by

email: [photonica2017@ipb.ac.rs](mailto:photonica2017@ipb.ac.rs) or tel. +381 62 805 38 58

## **Conference location**

### **Belgrade**

Belgrade (Beograd) is the capital of Serbia having about 2 million inhabitants. Belgrade is situated in South-Eastern Europe, on the Balkan Peninsula. It lies at the confluence of the Sava and Danube Rivers in north central Serbia, where the Pannonian Plain meets the Balkan Peninsula. Belgrade is the capital of Serbian culture, education, science and economy. As a result of its tumultuous history, a lot of nations have been living in Belgrade for centuries, and Serbs of Orthodox christian religion are the majority of population (90%). The official language is Serbian, while foreigners are recommended to use English in communication.

Belgrade is one of the oldest cities in Europe and since ancient times it has been an important traffic focal point, an intersection of the roads of Eastern and Western Europe. Its history lasts full 7000 years. The area around two great rivers, the Sava and the Danube has been inhabited as early as palaeolithic period.

### **Conference venue**

Serbian Academy of Sciences and Arts - SASA  
35, Knez Mihailova Str.  
11000 Belgrade

### **Dress code**

Serbian Academy of Sciences and Arts is a distinguished institution of supreme national importance. We kindly ask you to respect a dress code and not to wear :

- short skirts and pants (above the knee)
- spaghetti straps, tank top, and sleeveless shirts
- flip-flops and open-toed sandals

## SASA HALLS

SESSION	HALL	FLOOR
Opening ceremony	<b>Main hall</b>	2
Tutorial, keynote, invited lectures, progress report		
Closing ceremony		
Registration desk	<b>Main hall - vestibule</b>	2
Coffe breaks		
Sponsor exhibitions		
Contributed talks	<b>Main hall</b>	2
	<b>102</b>	1
COST MP1402 – HERALD	<b>102</b>	1
COST MP1406 – MultiscaleSolar	<b>103</b>	1
Cardially workshop		
Welcome cocktail	<b>SASA Club</b>	mezzanine
Poster sessions	<b>SASA Club</b>	mezzanine
	<b>SASA Gallery of Science and Technology</b>	entrance from Đure Jakšića Street

### Wi-Fi:

SANU-WLAN

Password:

5aNuW1AN

Additional settings

Proxy:

Auto or Automatically detect settings URL: <http://wpad.amres.ac.rs/wpad.dat> or Manual: proxy.rcub.bg.ac.rs port: 8080

### Registration

Sunday 27 August: 17:00 – 20:00 – SASA Foyer

Monday 28 - Thursday 31 August : 08:00 – 17:00 vestibule of the Main hall

## Information for speakers

All the presentations of the morning sessions should be prepared and loaded before each session from 8:00 to 09:00.

All the presentations of the afternoon sessions should be prepared and loaded during the lunch breaks.

## Poster sessions

### Poster session 1: Tuesday, August 29<sup>th</sup> 2017.

18:15 - 20:00 h

**Topics: 1, 2, 11** Club SASA;

**Topics: 3, 4** SASA Gallery of Science and Technology (entrance from Đure Jakšića Street)

### Poster session 2: Thursday, August 31<sup>st</sup> 2017.

16:30 - 18:30 h

**Topics: 5, 6, 7, 8** Club SASA;

**Topics 9, 10** Gallery of Science and Technology (entrance from Đure Jakšića Street)

For topics and poster numbers, please refer to the Book of abstracts.

Posters can be set up 3 hours prior to the poster session and removed by the end of the session.

Double sided tape will be provided for poster setting up.

## Social programme

Please, don't forget to bring your invitation cards for each of the social events. The invitation cards are provided at registration.

### Welcome cocktail

Serbian Academy of Sciences and Arts

35, Knez Mihailova Str.

Club SASA, mezzanine

### Monday, 28<sup>th</sup> August

**18.30 – 20.00h**

### Excursion

Boat ride and sightseeing from Belgrade's rivers. Catamaran vessel "KEJ I"

Location: The dock nearby "Promaja" restaurant, **GPS:** 44.816553, 20.449457

### Wednesday, 30<sup>th</sup> August

**18.00-20.30h**

Boat departure is at 18.00h. Boarding will start at 17.30h. Participants are kindly requested to be there at least 15 minutes before the departure.

## **Conference dinner**

Aeroklub restaurant,  
4, Uzun Mirkova Str. 2<sup>nd</sup> floor

**GPS:** 44.820068, 20.455795

**Thursday, 31<sup>th</sup> August**  
**20.00h**

## **Moving around**

### **Tourist information**

<http://www.tob.rs/en>

### **Local transportation**

<http://bg.ac.rs/en/students/moving/local-transportation.php>

<http://www.tob.rs/useful-informations/basic-information/city-public-transport>

## **Useful telephone numbers**

Police:192

Firemen:193

Ambulance:194

## **Taxi services**

In order to enhance taxi service from Belgrade Nikola Tesla Airport, the Assembly of City of Belgrade is introducing ongoing project aiming to organize new taxi service regulation system from Belgrade Airport. As a part of this project, the price of a taxi service from the airport is divided into 6 zones.

For the use of taxi services from Belgrade Nikola Tesla Airport to any destination in Belgrade area and further, please contact the city service TAXI INFO desk, located in the baggage reclaim area.

**Please take a taxi receipt at the information desk which contains the name of your destination and appropriate price for the taxi service.**

### **More information:**

<http://www.beg.aero/en/strana/8871/from-belgrade-airport>

### **Taxi companies:**

Beotaksi, 1970, 19999

Beogradski, 19801

Pink taksi, 19803

## Tips for Serbia and Belgrade

### Languages

Serbian is the official language of Serbia. The language serves as the native language of about 88% of the country's population. It is the only European language to be written using two distinct scripts. Serbian can be written using both the Latin and the Cyrillic alphabets. The Constitution of Serbia declares the Serbian Cyrillic as the official script of the nation while the Latin script is described as "script in official use." English is the most popular foreign language spoken in Serbia.

### Time zone

Belgrade and Serbia are located in the Central European time zone region – GMT +1 and/or GMT +2 as of the last week in the third month until the Saturday prior to the last week of the tenth month.

### Electricity

As in most cities of Continental Europe, the electricity voltage in Belgrade is 220V. Electrical outlets are standard European.

### Water

Tap water in Belgrade is safe to drink.

### Currency

The official currency in Serbia is **dinar**, abbreviated RSD. Money may be exchanged in all banks and post offices, as well as in authorized exchange offices. Exchange rate for 1 EUR is around 120 RSD.

Cash may be taken from ATMs installed in all major malls, bank branch offices and in public places 365 days in a year, 24 hours a day. Cell phone, e-cards and Internet cards may also be purchased in some of these places. American Express, Diners Club, Visa, Master Card, Maestro, Dina Card and Post Card are widely accepted in shops, hotels and restaurants.



## Detailed Timetable

### Monday, August 28<sup>th</sup> - SASA Main Hall

8.30 - 09.00	Opening ceremony
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#### Chairman: B. Jelenković

09.00 - 10.20	<b>W. Krolkowski</b> ( <i>tutorial lecture</i> ) "Wave propagation and localisation in nonlocal nonlinear media"
10.20 - 10.40	Coffee break

#### Chairman: B. Gaković

10.40 - 11.25	<b>K. Hingerl</b> ( <i>keynote lecture</i> ) "A classical model for depolarization by temporal and spatial decoherence"
11.35 - 12.05	<b>V. Pasiskevicius</b> ( <i>invited lecture</i> ) "Backward-wave optical parametric interactions in structured nonlinear media"
12.05 - 12.35	<b>A. Fratallocchi</b> ( <i>invited lecture</i> ) "Metal free structural colors via disordered nanostructures with nm resolution and full CYMK color spectrum"
12.35 - 14.30	Lunch break

#### Chairman: Lj. Hadžievski

14.30 - 15.45	<b>S. Radić</b> ( <i>tutorial lecture</i> ) "Beyond the myth of nonlinear capacity limits in fiber optic transmission"
15.45 - 16.00	<b>A. Totović</b> ( <i>O.C.5</i> ) "Quiescent points of self-seeded RSOA-FCL with Rayleigh backscattering feedback"
16.00 - 16.20	Coffee break

#### Chairman: M. Trtica

16.20 - 16.50	<b>R. Slavik</b> ( <i>invited lecture</i> ) "Signal Propagation Time through Hollow-Core Fibres and its Low Sensitivity to Temperature"
16.50 - 17.10	<b>N. Tarasov</b> ( <i>progress report</i> ) "Instabilities in nonlinear systems"
17.10 - 17.30	<b>M. Chernysheva</b> ( <i>progress report</i> ) "Mid-infrared fibre laser sources and their application for vibrational spectroscopy"
17.30 - 17.50	<b>M. Popović</b> ( <i>progress report</i> ) "Photoacoustic response of an transmission photoacoustic configuration for two-layer samples with thermal memory"
17.50 - 18.05	<b>L. Nedelchev</b> ( <i>O.M.20</i> ) "Polarization holographic gratings with high diffraction efficiency recorded in azopolymer PAZO"
18.05 - 18.20	<b>R. Geiss</b> ( <i>N.O.7</i> ) "Enhanced second harmonic generation in lithium niobate photonic crystal cavities"

## Thursday, August 29<sup>th</sup> - Main Hall

**Chairman: K. Homewood**

09.00 - 10.20	<b>B. Chickov</b> ( <i>tutorial lecture</i> ) "3D laser printing of polymers, nanoparticles, and living cells"
10.20 - 10.40	Coffee break

**Chairman: P. Andjus**

10.40 - 11.25	<b>J. Widengren</b> ( <i>keynote lecture</i> ) "Ultrasensitive and ultrahigh resolution fluorescence spectroscopy and imaging for fundamental biomolecular studies and towards clinical diagnostics"
11.35 - 12.05	<b>I. Jakovcevski</b> ( <i>invited lecture</i> ) "Confocal synaptology – a simple method for the assessment of synaptic rearrangements in neurodegenerative disorders and upon nervous system injury"
12.05 - 12.35	<b>J. Štrancar</b> ( <i>invited lecture</i> ) "Lipid wrapping as a molecular initiating event in nanotoxicology through fluorescence microspectroscopy and super-resolution microscopy"
12.35 - 14.30	Lunch break

**Chairman: L. Mančić**

14.30 - 15.00	<b>J. Luning</b> ( <i>invited lecture</i> ) "Probing Ultrafast Magnetization Dynamics with Resonant X-ray Scattering Techniques"
15.00 - 15.30	<b>T. Dučić</b> ( <i>invited lecture</i> ) "Synchrotron light based spectro-microscopies: illumination of cellular disorders in neuro-degenerative diseases"
15.30 - 15.45	<b>S. Antić</b> ( <i>B.17</i> ) "Voltage-Sensitive Dye Imaging of Membrane Potential Transients in Thin Dendritic Branches of Cortical Pyramidal Neurons"
15.45 - 16.00	<b>G. Tserevelakis</b> ( <i>B.14</i> ) "Combined photoacoustic and optical microscopy for the detailed description of ciliary body anatomy"
16.00 - 16.20	Coffee break

**Chairman: I. Vasić**

16.20 - 16.50	<b>A. Borzsonyi</b> ( <i>special invited lecture – LaserLab Europe</i> ) "Research opportunities within LaserLab Europe and ELI"
16.50 - 17.10	<b>I. Krešić</b> ( <i>progress report</i> ) "Spontaneous light-mediated magnetism in cold atoms"
17.10 - 17.30	<b>M. Mladenović</b> ( <i>progress report</i> ) "Electronic Properties of Interfaces between Domains in Organic Semiconductors"
17.30 - 17.50	<b>U. Ralević</b> ( <i>progress report</i> ) "Surface enhanced Raman spectroscopy of thiocyanine coated silver nanoparticle clusters"
17.50 - 18.05	<b>V. Marinova</b> ( <i>D.C.13</i> ) "Hybrid organic/inorganic devices for display applications"

## Wednesday, August 30<sup>th</sup> - Main Hall

**Chairman: M. Stepić**

09.00 - 10.20	<b>Z. Zalevsky</b> ( <i>tutorial lecture</i> ) "Translation of remote photons based sensing into virtual tactile and hearing senses"
10.20 - 10.40	Coffee break

**Chairman: G. Isić**

10.40 - 11.25	<b>M. Kralj</b> ( <i>keynote lecture</i> ) "In situ visual observation of 2D materials growth and modifications, and characterization of their optical properties"
11.35 - 12.05	<b>M. Artemyev</b> ( <i>invited lecture</i> ) "Optical properties of 2D colloidal semiconductor quantum wells and hybrid structures"
12.05 - 12.35	<b>C. Teichert</b> ( <i>invited lecture</i> ) "Functionalizing 2D materials by small conjugated molecules"
12.35 - 14.30	Lunch break

**Chairman: P. Mihailović**

14.30 - 15.00	<b>P. Rakich</b> ( <i>invited lecture</i> ) "Stimulated Brillouin Scattering in Silicon Photonics"
15.00 - 15.30	<b>F. Baronio</b> ( <i>invited lecture</i> ) "Dark Line, Lump and X-solitary Waves in Optical Media"
15.30 - 16.00	<b>F. Setzpfandt</b> ( <i>invited lecture</i> ) "Spontaneous parametric down-conversion in periodically structured media"

## Thursday, August 31<sup>st</sup> - Main Hall

**Chairman: F. Cattalioti**

09.00 - 10.20	<b>A. Weis</b> ( <i>tutorial lecture</i> ) "Magneto-optical effects in multi-level atoms: Fundamentals" "Magneto-optical effects in multi-level atoms: Applications"
10.20 - 10.40	Coffee break

**Chairman: A. Balaž**

10.40 - 11.25	<b>S. K. Adhikari</b> ( <i>keynote lecture</i> ) "Three-dimensional "solitons" in Bose-Einstein condensates and nonlinear optics"
11.35 - 12.05	<b>A. Pelster</b> ( <i>invited lecture</i> ) "Two Intriguing Examples for Topological Effects in Ultracold Atoms"
12.05 - 12.35	<b>L. Salasnich</b> ( <i>invited lecture</i> ) "Bright solitons in ultracold atoms"
12.35 - 14.30	Lunch break

**Chairman: Ch. Andreeva**

14.30 - 15.00	<b>R. Loew</b> ( <i>invited lecture</i> ) "Hot Rydberg atoms and more"
15.00 - 15.30	<b>C. Affolderbach</b> ( <i>invited lecture</i> ) "Precision measurements for compact vapor-cell atomic clocks"
15.30 - 15.45	<b>J. Akram</b> ( <i>Q.O.9</i> ) "A distinguishable single excited-impurity in a Bose-Einstein condensate"
15.45 - 16.00	<b>M. Radonjić</b> ( <i>Q.O.10</i> ) "Photonic simulation of open quantum systems with various exchange statistics"
16.00 - 16.20	Coffee break

## Thursday, August 31<sup>st</sup> - Hall 102

**Chairman: N. Stojanović**

14.30 - 14.45	<b>S. Kostritskii</b> ( <i>N.O.18</i> ) "Nonlinear light scattering and nonlinear absorption in photorefractive LiNbO3 crystals studied by Z-scan technique"
14.45 - 15.00	<b>M. Čubrović</b> ( <i>N.O.15</i> ) "Vortices and topological structures in photorefractive materials"
15.00 - 15.15	<b>V. Slavchev</b> ( <i>N.O.9</i> ) "Broad-band femtosecond pulses, $\lambda^3$ type diffraction and X-waves. Evolution and management"
15.15 - 15.30	<b>T. Apostolova</b> ( <i>U.O.3</i> ) "High-harmonic generation in bulk diamond irradiated by intense ultrashort laser pulse"
15.30 - 15.45	<b>B. Călin</b> ( <i>D.C.14</i> ) "Laser Fabrication of Diffractive Optical Elements for Two-Dimensional Airy Beams"
15.45 - 16.00	<b>G. Ehrlich</b> ( <i>O.M.P.14</i> ) "Open Triangular Ring Cavity Resonator Integrating a Nanograting Mirror"
16.00 - 16.20	Coffee break

## **Friday, September 1<sup>st</sup> - Main Hall**

**Chairman: M. Božić**

09.00 - 09.45	<b>W. Pernice</b> ( <i>keynote lecture</i> ) "All-optical processing using phase-change nanophotonics"
09.45 - 10.30	<b>M. Belić</b> ( <i>keynote lecture</i> ) "Rogue waves, Talbot carpets and accelerating beams"
10.30 - 10.50	Coffee break

**Chairman: D. Gvozdić**

10.50 - 11.35	<b>L. P. Barry</b> ( <i>keynote lecture</i> ) "Developing high capacity fibre transmission systems employing spectrally efficient super-channel technology"
11.45 - 12.15	<b>P. O. Leisher</b> ( <i>invited lecture</i> ) "Advancements in high efficiency semiconductor lasers for high power applications"
12.15 - 12.45	<b>I. Gerhardt</b> ( <i>invited lecture</i> ) "Single Photons: Hong-Ou Mandel Experiments and beyond"
12.45 - 14.30	Lunch break

**Chairman: S. Petrović**

14.30 - 15.00	<b>D. van Oosten</b> ( <i>invited lecture</i> ) "Time-resolved studies of femtosecond laser surface ablation of dielectrics and Semiconductors (in air)"
15.00 - 15.30	<b>M. Zamfiresku</b> ( <i>invited lecture</i> ) "Applications of 3D laser lithography"
15.30 - 15.45	<b>B. Resan</b> ( <i>U.O.6</i> ) "Multiphoton imaging with blue-diode-pumped SESAM-modelocked Ti:Sapphire oscillator"
15.45 - 16.00	<b>M. Kamalian</b> ( <i>N.O.17</i> ) "Nonlinear Fourier analysis of mode-locked laser"
16.00 - 16.20	Coffee break

**Chairman: M. Živanov**

16.20 - 16.50	<b>Z. Amin-Akhlghi</b> ( <i>special invited lecture – COST MP1406</i> ) "Innovation, Industrial Collaboration and funding opportunities"
16.50 - 17.10	<b>D. Stupar</b> ( <i>progress report</i> ) "Development and application of an electronic sensing system by using polymer optical fibre with sensitive zone"
17.10 - 17.30	<b>J. Bajić</b> ( <i>progress report</i> ) "Low cost optical sensors for absolute rotary position measurement"
17.30 - 17.50	<b>M. Obradov</b> ( <i>progress report</i> ) "Plasmonics for infrared detectors"
17.50 - 18.05	<b>M. Spasenović</b> ( <i>D.C.12</i> ) "Graphene acoustic diaphragms"
18.05 - 18.20	<b>M. Trajković</b> ( <i>D.C.17</i> ) "Insight into different module options for the electro-absorption modulator"

## Friday, September 1<sup>st</sup> - 102 Hall

Chairman: **J. Radovanović**

14.30 - 14.45	<b>W. Moreno</b> ( <i>L.S.M.5</i> ) "Light-shift in pulsed optically pumped Rubidium atomic clock"
14.45 - 15.00	<b>Z. Grujić</b> ( <i>L.S.M.6</i> ) "Improving the accuracy of cesium magnetometers"
15.00 - 15.15	<b>D. Khachatryan</b> ( <i>L.S.M.11</i> ) "Retrieval of group refractive index in a dense atomic vapor helped by buffer gas-assisted radiation channeling"
15.15 - 15.30	<b>A. Demić</b> ( <i>O.P.11</i> ) "Density Matrix Superoperator for Terahertz Quantum Cascade Lasers"
15.30 - 15.45	<b>R. Pan</b> ( <i>U.O.4</i> ) "En route: single-shot THz characterization technique for THz beamline at FLASH1"
15.45 - 16.00	<b>M. Cojocari</b> ( <i>O.M.P.20</i> ) "Phase and amplitude tunability in planar THz metamaterials with toroidal response"
16.00 - 16.20	Coffee break

Chairman: **B. Resan**

16.20 - 16.35	<b>A. Kovačević</b> ( <i>L.M.I.11</i> ) "Inducing periodic structures on multilayers of Ti and Ta by femtosecond laser beam"
16.35 - 16.50	<b>I. Bliznakova</b> ( <i>L.M.I.12</i> ) "Micro-structured biopolymer scaffolds fabricated by femtosecond laser ablation"
16.50 - 17.05	<b>S. Pazzagli</b> ( <i>O.P.10</i> ) "Organic Nanocrystals for Quantum Nanophotonic Applications"
17.05 - 17.20	<b>D. Onal</b> ( <i>B.18</i> ) "Designing Multi-Functional Plasmonic Nanoparticles for Cancer Theranostics"
17.20 - 17.35	<b>J. Petrović</b> ( <i>B.20</i> ) "Fetal Actometer Based on Optical Fibre Gratings"
17.35 - 17.50	<b>M. Rabasović</b> ( <i>B.21</i> ) "Time resolved luminescence spectra of greater celandine ( <i>Chelidonium majus</i> L.)"
17.50 - 18.05	<b>D. Mokrousova</b> ( <i>N.O.12</i> ) "Measurement of powerful ultrashort UV pulse parameters"

## Friday, September 1<sup>st</sup> - Main Hall

18.20	Closing
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**PHOTONICA 2017** is organized under auspices and with support of the Ministry of Education, Science and Technological Development, Serbia ([www.mpn.gov.rs](http://www.mpn.gov.rs)). PHOTONICA 2017 is supported and recognized by The Integrated Initiative of European Laser Research Infrastructures LaserLab-Europe ([www.laserlab-europe.eu](http://www.laserlab-europe.eu)) and European Physical Society ([www.eps.org](http://www.eps.org)).



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