UNIVERSITY OF BELGRADE
INSTITUTE OF PHYSICS | BELGRADE
NATIONAL INSTITUTE OF THE REPUBLIC OF SERBIA
Pregrevica 118, 11080 Zemun - Belgrade, Serbia
Tel: +381 11 3713000, Fax: +381 11 3162190, www.ipb.ac.rs

Poziv za doktorande - Pridruži se našem timu

Kvantne tehnologije i biofotonika

Laboratorija za kvantnu biofotoniku Centra za fotoniku, Instituta za fiziku u Beogradu, poziva motivisane kandidate da se pridruže našem timu. Otvoreni smo za prijem do četiri nova doktoranda, uz zaposlenje na Institutu.

Rok za prijavu: 15. decembar 2026. • Planirani početak: februar 2027.

Istraživanje i izbor teme

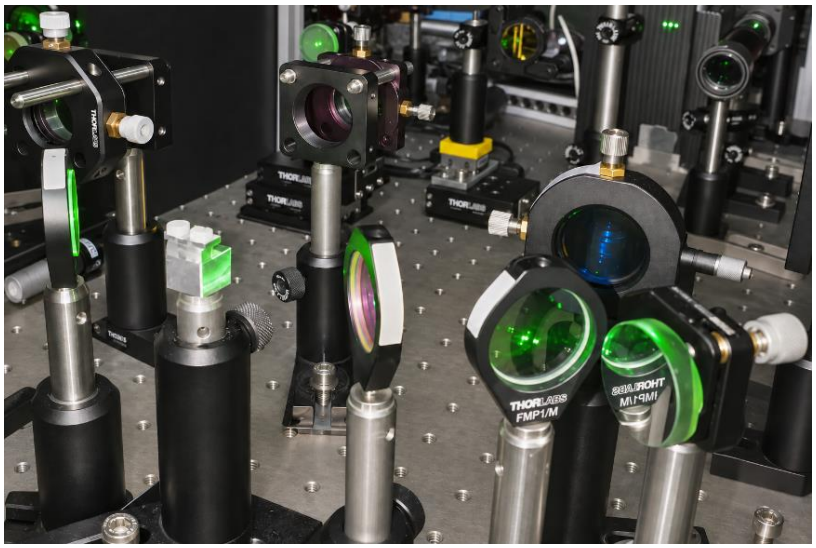
Kako kvantna svojstva svetlosti mogu otkriti sastav i strukturu uzorka? Kako možemo ispitivati uzorak jednom talasnom dužinom, a informacije očitavati na drugoj?

Razvijamo eksperimentalne sisteme i metode zasnovane na kvantno korelisanoj svetlosti, sa fokusom na kvantnu spektroskopiju i mikroskopiju pomoću nedetektovanih fotona. Istražujemo njihove mogućnosti u biofotonici i proučavanju bioloških uzoraka.

Naš tim razvija više istraživačkih pravaca. Tokom upoznavanja sa laboratorijom i njenim radom moći ćeš da prepoznaš teme koje te posebno zanimaju i da sa potencijalnim mentorom napraviš okvirni plan doktorskog istraživanja, u dogovoru sa odgovarajućim fakultetom.

Dodatna prilika kroz međunarodni projekat QUANTEX

QUANTEX otvara jedan od tih pravaca uz posebno, dodatno finansiranje. Projekat podržava NATO program Science for Peace and Security, a realizujemo ga sa Tehničkim univerzitetom u Darmštatu. Usmeren je na kvantnu spektroskopiju u srednjem infracrvenom opsegu pomoću



Pregrevica 118, 11080 Zemun - Belgrade, Serbia
Tel: +381 11 3713000, Fax: +381 11 3162190, www.ipb.ac.rs

nedetektovane svetlosti radi prepoznavanja tragova eksplozivnih materijala i dopunjuje šire istraživačke aktivnosti laboratorije.

Koga tražimo?

Poziv je namenjen kandidatima iz fizike, elektrotehnike, fizičke hemije i srodnih oblasti. Potrebno je da doktorske studije upišeš do roka koji propisuje Ministarstvo, pre kraja decembra 2026, i da ispunjavaš ostale propisane uslove.

Važni su nam radoznalost, motivacija za eksperimentalni rad, sistematičnost, spremnost za saradnju i poznavanje engleskog jezika.

Iskustvo u optici, fotonici, spektroskopiji, mikroskopiji, programiranju ili obradi podataka predstavlja prednost. **Prethodno iskustvo u kvantnoj optici nije neophodno, obuka je deo rada u timu.**

Tvoj rad i naša podrška

U skladu sa istraživačkom temom, razvijaćeš i karakterisati optičke eksperimente, raditi sa laserima, nelinearnim kristalima i detektorima, automatizovati merenja, obrađivati spektre i slike i porediti eksperimentalne i numeričke rezultate. Rad može obuhvatiti i primenu metoda mašinskog učenja i multivarijantne analize podataka.

Uz podršku mentora i istraživačkog tima, postepeno ćeš preuzimati samostalne zadatke i učestvovati u pripremi naučnih publikacija.

Nudimo eksperimentalnu obuku, mentorsku podršku i međunarodnu saradnju, uz mogućnosti za istraživačke posete, projektne obuke i učešće na konferencijama, u skladu sa projektnim aktivnostima i raspoloživim sredstvima.

Rad će se odvijati na **Institutu za fiziku u Beogradu, Pregrevica 118, Zemun**. Planirani početak angažmana je **februar 2027.** Detalji zaposlenja, trajanja angažmana i finansijskih uslova biće predstavljeni kandidatima tokom razgovora.

Kako se prijaviti?

Pošalji:

- kratku biografiju;
- motivaciono pismo, do jedne strane;
- pregled položenih ispita na osnovnim i master studijama;
- kratak opis master rada ili dosadašnjeg istraživačkog iskustva;
- pismo preporuke, ukoliko ga imaš (nije obavezno);
- spisak publikacija ili linkove ka relevantnim projektima, ukoliko ih imaš.

UNIVERSITY OF BELGRADE
INSTITUTE OF PHYSICS BELGRADE
NATIONAL INSTITUTE OF THE REPUBLIC OF SERBIA
Pregrevica 118, 11080 Zemun - Belgrade, Serbia
Tel: +381 11 3713000, Fax: +381 11 3162190, www.ipb.ac.rs

U motivacionom pismu navedi istraživačke teme koje te posebno zanimaju i veštine koje želiš da razvijaš tokom doktorskog rada. Kandidati koji uđu u uži izbor biće pozvani na razgovor.

Prijave i pitanja: marijac@ipb.ac.rs, dr Marija Ćurčić

Naslov poruke: Prijava za poziciju doktoranda - kvantna biofotonika

Rok za prijavu: 15. decembar 2026.

UNIVERSITY OF BELGRADE
INSTITUTE OF PHYSICS | BELGRADE
NATIONAL INSTITUTE OF THE REPUBLIC OF SERBIA
Pregrevica 118, 11080 Zemun - Belgrade, Serbia
Tel: +381 11 3713000, Fax: +381 11 3162190, www.ipb.ac.rs

PhD Opportunities - Join Our Team

Quantum Technologies and Biophotonics

The Laboratory for Quantum Biophotonics at the Photonics Centre, Institute of Physics Belgrade, invites motivated candidates to join our team. We can welcome up to four new PhD researchers, with employment at the Institute.

Application deadline: 15 December 2026 • Planned start: February 2027

Research and Choice of Topic

How can the quantum properties of light reveal the composition and structure of a sample? How can we probe a sample at one wavelength and retrieve information at another?

We develop experimental systems and methods based on quantum-correlated light, focusing on quantum spectroscopy and microscopy using undetected photons. We explore their potential in biophotonics and the study of biological samples.

Our team pursues several research directions. As you get to know the laboratory and its work, you will explore the topics that interest you and develop an initial PhD research plan with a prospective supervisor, in coordination with the relevant faculty.

The International QUANTEX Project

One of our research directions is pursued through the international **QUANTEX** project, supported by the NATO Science for Peace and Security Programme and carried out in collaboration with the Technical University of Darmstadt.

The project focuses on developing a quantum mid-infrared spectroscopic system using undetected light to identify trace explosive materials. The experimental techniques and expertise we develop complement the laboratory's broader research activities.

Who Are We Looking For?

We welcome candidates in physics, electrical engineering, physical chemistry and related fields. You must enrol in doctoral studies by the Ministry's prescribed deadline, before the end of December 2026, and meet the other applicable requirements.

We value curiosity, motivation for experimental work, a systematic approach, a willingness to collaborate and a working knowledge of English.

Experience in optics, photonics, spectroscopy, microscopy, programming or data analysis is an advantage. **Previous experience in quantum optics is not required, training is part of working with our team.**

UNIVERSITY OF BELGRADE
INSTITUTE OF PHYSICS BELGRADE
NATIONAL INSTITUTE OF THE REPUBLIC OF SERBIA
Pregrevica 118, 11080 Zemun - Belgrade, Serbia
Tel: +381 11 3713000, Fax: +381 11 3162190, www.ipb.ac.rs

Your Work and Our Support

Depending on your research topic, you will develop and characterise optical experiments, work with lasers, nonlinear crystals and detectors, automate measurements, process spectra and images, and compare experimental and numerical results. Your work may also involve machine learning and multivariate data analysis methods.

With guidance from your supervisor and the research team, you will gradually take on independent tasks and contribute to scientific publications.

We offer experimental training, mentoring and international collaboration, with opportunities for research visits, project training and conference participation, depending on project activities and available funding.

You will be based at the **Institute of Physics Belgrade, Pregrevica 118, Zemun**. The planned start date is **February 2027**. Details of employment, the duration of the appointment and financial terms will be discussed with candidates during the interview.

How to Apply

Please send:

- A short CV.
- A motivation letter of up to one page.
- Academic transcripts listing completed courses and grades from your bachelor's and master's studies.
- A brief description of your master's thesis or previous research experience.
- A letter of recommendation, if available (optional).
- A list of publications or links to relevant projects, if available.

In your motivation letter, describe the research topics that particularly interest you and the skills you would like to develop during your PhD. Shortlisted candidates will be invited to an interview.

Applications and enquiries: marijac@ipb.ac.rs • Dr Marija Ćurčić

Subject line: PhD Position Application - Quantum Biophotonics

Application deadline: 15 December 2026