

# Institute of Electronic Materials Technology

133 Wólczyńska str., 01-919 Warsaw, POLAND



## **Call for PhD student (graduate student) scholarships**

*“Development of tellurite photonic crystal fibres for nonlinear applications”*

*“Supercontinuum generation using all-normal dispersion”*

### **Number of positions open: 2**

We are seeking a skilled candidates for PhD student positions at Institute of Electronic Materials Technology within the framework of SUPUVIR (SUPercontinuum broadband light sources covering UV to IR applications). SUPUVIR is a new European Training Network – a consortium of 10 partners in 5 different EU countries (Denmark, UK, Austria, Poland, France, and Finland), funded by the European H2020 programme. SUPUVIR is dedicated to development of supercontinuum sources, which are laser sources emitting coherent laser light that is broadband enough to be considered “white”. The research and development in SUPUVIR will produce supercontinuum sources enabling new science and applications for optical imaging, spectroscopy, sensing and quality control.

The PhD positions opened at Institute of Electronic Materials Technology will focus strongly on designing and fabrication of a new class of photonic crystal fibers, the microstructure of which is composed of different types of thermally matched glasses. This enables designing of fibers with broadband flattened dispersion profiles and specifically all-normal, flat dispersion fibers can be achieved with this approach. Such fibers readily enable octave-spanning, coherent and pulse-preserving supercontinuum pulses for a number of attractive applications, i.e. high-precision frequency metrology, single-cycle pulse generation, or coherent seeding of other active optical devices. Successful candidates will be involved in all stages of development of such fibers, including design, fabrication and experimental, as well as numerical work on normal dispersion supercontinuum generation.

The advertised post is funded by the Marie Skłodowska Curie Action within the framework of the Innovative Training Network scheme H2020-MSCA-ITN-2016. The duration of the fixed-term contract is 36 months and the earliest starting date is 1st November 2016.

**Terms of employment: 3 years,**

### **Benefits:**

**Gross annual salary (Living allowance): EUR 28 512,--**

- **Mobility allowance: EUR 600,-- per month / free of tax (Contribution to household, relocation and personal travel expenses)**
- **Family allowance: EUR 250,-- per month (for fellows who have family at the time of recruitment – i.e. persons linked to the fellow by marriage or a relationship with equivalent status or dependent children who are actually being maintained by the fellow).**

### **Profile of a successful candidate:**

- MSc degree or equivalent in Engineering or Physics
- strong background in Physics, , strong interest in nonlinear optics, fibre optics and waveguides, and laser physics in general,
- experienced in one of the following: linear or nonlinear modelling of properties of optical fibers, experimental characterization (measurements) of properties of optical fibers
- genuine intent to pursue a PhD degree
- Fluent in written and spoken English
- Programming experience (Matlab or C), skills in ZEMAX are advantageous
- conformity with mobility rules set out in the Innovative Training Network scheme H2020-MSCA-ITN-2016
- be able to undertake transnational mobility to Poland, upon being awarded the appointment; the candidate must not have resided in Poland for more than 12 months in the 3 years immediately before the application date.

**We offer:**

- access to excellent technological and experimental facilities dedicated to structured fiber optics and glass synthesis
- available supervision and guidance during the PhD programme

Furthermore, through the international training network, the PhD students will have the opportunity to spend time at other European partners' premises and gain knowledge in the topic of the action,

**Additional information**

Additional information can be obtained by contacting Ryszard Buczyński, Associate Professor at Institute of Electronic Materials Technology, [ryszard.buczynski@itme.edu.pl](mailto:ryszard.buczynski@itme.edu.pl) or Mariusz Klimczak, Assistant Professor, [mariusz.klimczak@itme.edu.pl](mailto:mariusz.klimczak@itme.edu.pl), +48 22 8353041 ext. 507, Institute of Electronic Materials Technology, Department of Glass, Wolczynska 133, Warsaw, Poland.

Please apply by November 15, 2016(extended deadline) by sending your application to the e-mail addresses provided above. Please be sure to include a letter of motivation with a reference to SUPUVIR, your CV (including names and contact details of at least two references) and a copy of MSc degree diploma.