Post-doctoral Fellow on the project *Acrobatics of molecular crystals – thermosalient materials for new generation of actuators*

Department of Physics at the Faculty of Science, University of Zagreb, Croatia, includes outstanding scientific and educational performance and integration in the *European Research Area* as a recognizable regional center for research and work at university-level in physics.

We are currently seeking to recruit a:
Post-doctoral Fellow
in the Laboratory for Microstructural Investigation
Time-limited position

**Description**

**JOB DESCRIPTION**

You will participate in the experimental elucidation of the thermosalient phenomenon in the several exotic systems. Thermosalient crystals are biomimetic, nonpolymeric self-actuators par excellence. Yet, due to exclusivity and individuality of the phenomenon, but also due to the complexity of analytical methods for its characterization, reasons behind this colossal self-actuation remain unexplained.

With the aim of final elucidation of the thermosalient phenomenon, this project represents first systematic attempt to disentangle the interplay between the thermodynamic, kinematic, structural and macroscopic factors that drive the thermosalient effect by employing various diffraction (XRD), microscopic (hot stage), spectroscopic, (FTIR, UV/VIS) and thermal (DTA/DSC/TG) techniques. Systems under study will also be investigated by the means of quantomechanical modeling (DFT). Finally, never mentioned in the literature so far, results of the experimental methods will be combined with the results of quantomechanical modeling of this visually very attractive, and potentially technologically very useful, effect.

You will work with a team of scientists on the synthesis of thermosalient materials and their crystallographic characterization (powder and single crystal XRD).

Further information may be obtained from assist. prof. Željko Skoko (email: zskoko@phy.hr)

**PROFILE, SKILLS AND EXPERIENCE**

- PhD in Physics, Chemistry or a related field
- Experience with solving crystal structures (from powder and single crystal data) is mandatory
- Experience in crystallization procedures is also required
- Good time management skills and ability to prioritize, ability to interact with staff and facility users at all levels, ability to work as part of a multi-disciplinary team are essential qualities
- English proficiency
WORK CONDITIONS

Contract of up to 24 months (it will end by 01.07.2017).
The monthly salary will be approx. 950€.

If you are interested in this position please send a letter of interest to zskoko@phy.hr while complete application documentation (curriculum vitae, relevant diploma, certificate of citizenship, two references with their full titles, addresses and e-mail addresses) should be sent to kadrovска@dekanat.pmf.hr

No. of positions available: 1

**Research Fields**
Physics, Chemistry

**Career Stage**
Experienced researcher or 4-10 yrs. (Post-Doc)

**Research Profiles**
Recognized Researcher (R2)