

## **Project 2.6. New Molecular Architectures for Exploring Singlet Fission**

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**Institute:** Institute of Organic Chemistry Polish Academy of Sciences

**Unit:** Team 10d

**WWW:** [www.gawel.edu.pl](http://www.gawel.edu.pl) ; [www.icho.edu.pl](http://www.icho.edu.pl)

### **Background:**

We are looking for a motivated graduate student to join a new and vibrant research group synthesizing and studying novel optoelectronic organic materials. Key responsibilities at this position will include the synthesis and analysis of polycyclic hardocarbon-based materials, solving encountered synthetic problems, creating new ideas within the project scope, testing hypotheses and analyzing scientific data from a variety of sources, regular reporting of the progress. During this appointment you will gain a variety of transferable skills necessary in academic and industrial environment.

### **Aim:**

Renewable energy sources will play a key role in the transformation of the energy sector and will cover 86% of global energy consumption by 2050. Theoretical studies predict that utilizing singlet fission in solar cells can increase their theoretical maximum efficiency from 33% up to 45%. Answering urging questions regarding application of singlet fission in photovoltaics requires new molecular architectures. In this project, we will explore new molecular strategies specially designed to answer some of the remaining questions essential to fully establish the structure-property relationships in singlet fission chromophores.

### **Requirements:**

- Hold an MSc (or equivalent) in Chemistry.
- Have some practical experience in synthetic organic chemistry.
- Have an excellent general knowledge of chemistry. Good knowledge of physical organic chemistry and materials sciences will be additional asset.
- Communicate well in English in writing and in oral and visual presentations, and be able to write reports for publication in scientific journals.
- Be a good team player.
- Be willing to play a role in keeping the laboratory running by assuming a share of group responsibilities.
- Be highly motivated and have a strong commitment to research