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| **Type and description** | **VP** – Visiting Professor  |
| **Course name** | **Organic Electronic Materials - Creating Performance by Advanced Synthesis** |
| **Course name in Polish** | Materiały dla elektroniki organicznej – zaawansowane metody syntezy materiałów o pożądanych właściwościach |
| **Language of instruction** | English |
| **Course coordinator and academic teachers** | **prof. Klaus Müllen**, Max-Planck-Institute for Polymer Research, Mainz, Germany; ORCID: [0000-0001-6630-8786](https://orcid.org/0000-0001-6630-8786) |
| **Form of classes and number of teaching hours** |

|  | **Lecture** | **Tutorials** | **Laboratory** | **Project** | **Seminar** | **Other** | **Total of teaching hours during semester** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Contact hours | 16 |  | 0 | 10 | 4 | 0 | 30 |
| E-learning | No | No | No | No | No | No |  |
| Assessment criteria (weightage) | 0.50 | 0.00 | 0.00 | 0.30 | 0.20 | 0.00 |  |

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| **Course organisation and content** | Organic and polymer synthesis needs structural imagination and technical competence. Size and dimensionality of (macro)molecules are its key design principles. When combined with methods of processing, synthesis can realize the desired electronic and optical properties of devices. Whether targeting light emitters and semiconductors or future topological insulators, synthesis is the enabling science - also for meeting urgent societal demands. |
| **Assessment methods** | Written exams (weight 0.7), project reports (weight 0.3) |
| **Basic reference materials** | 1. From Single Molecules to Nanoscopically Structured Materials, Eds. Basche, T.; Müllen, K.; Schmidt, M., Springer International Publishing, 2014. 2. Polymer Precursor-Derived Carbon, Eds. Naskar, A. K.; Hoffman, W. P., 2014.3. Electronic Materials: The Oligomer Approach, Eds. Klaus Müllen, G. Wegner, Wiley, 2009. |
| **Other reference materials** | current literature indicated by lecturer |
| **Average student workload outside classroom** | 20 hrs |
| **Comments** | - |
| **Last update** | 2019-04-12 |