A Versatile One-Pot Access to Cyanoarenes from ortho- and para-Quinones: Paving the Way for Cyanated Functional Materials

Invited for the cover of this issue is the team of Florian Glöcklhofer at the TU Wien. The cover reflects the ups and downs they experienced during the investigation of the novel synthesis of cyanoarenes from quinones, which is highlighted by the magnifying glass. The sometimes exhausting experiments were finally rewarded by the versatile new one-pot reaction presented in the accompanying full paper. The significance for the field of material chemistry is illustrated by the blueprint showing the crystal structure of 6,13-dicyanopentacene. Read the full text of the article at 10.1002/chem.201600004.

What was the biggest surprise (on the way to the results presented in this paper)?

We really did not expect the new synthesis to work almost equally well using an ortho- instead of para-quinones as the substrate. Another big surprise was the stability of the alkynyl-substituted 9,10-dicyanoanthracene and its precursor towards the reaction conditions.

Did serendipity play a part in this work?

Most ideas and results were obtained by systematic investigations. However, some of the most interesting data is owed to idleness. When we did not completely empty a rack after column chromatography for two weeks, we obtained long dark needles of 6,13-dicyanopentacene. X-ray diffraction enabled us to determine the crystal structure, which is also depicted on the front cover.

Who designed the cover?

Felix Streile, a 3D artist working in Vienna, created the cover picture together with Florian, who provided the scientific input. Since it was their first time to design and to suggest a cover, this interdisciplinary collaboration was exciting for both of them. It certainly helped that they have known each other for years, since they are from the same town in western Austria, Bregenz.

Is your current research mainly curiosity driven (fundamental) or rather applied?

Curiosity is the main driving force of our research, but of course we bear in mind applications of our materials. Our group specialized in the synthesis of novel compounds for organic electronics. This is also the field of application envisaged for the materials that can be prepared by the presented new synthesis.