

# REGULAR 2-D ASSEMBLIES OF MOLECULAR PHOTOSWITCHES

Lukáš Severa,<sup>a</sup> Carina Santos Hurtado,<sup>a</sup> Guillaume Bastien,<sup>a</sup> Milan Mašát,<sup>a</sup> Igor Rončević,<sup>a</sup> Ivana Císařová,<sup>b</sup> Zdeněk Bastl<sup>c</sup> and Jiří Kaleta<sup>a,\*</sup>

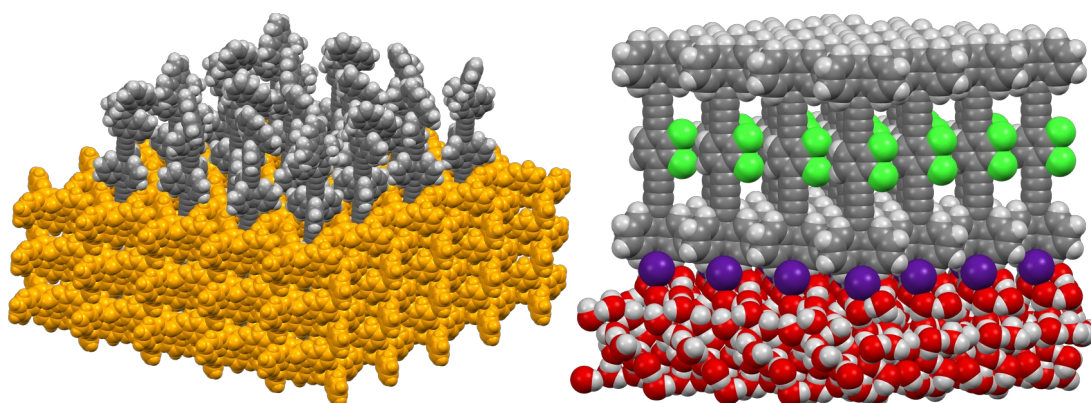
<sup>a</sup> Institute of Organic Chemistry and Biochemistry of the CAS, Flemingovo nám. 2, 160 00 Prague 6, Czech Republic.

<sup>b</sup> Department of Inorganic Chemistry, Faculty of Science, Charles University in Prague, Hlavova 2030, 12840 Prague 2, Czech Republic.

<sup>c</sup> J. Heyrovský Institute of Physical Chemistry of the CAS, Dolejškova 2155/3, 182 23 Prague 8, Czech Republic.

\* kaleta@uochb.cas.cz

Controlled attachment of various photoswitches to flat surfaces is an attractive and promising route towards new generation of regular 2-D materials. Organization of individual molecules into regular arrays (Figure 1) should amplify their function and lead thus to the new types of smart materials with potential application for example in nanoelectronics. Several approaches leading to such systems built on solid-gas and liquid-gas interphases will be discussed.



**Figure 1:** Regular array of molecular motors (left) and rotors (right).

## ACKNOWLEDGEMENT

This work was supported by the Institute of Organic Chemistry and Biochemistry of the Czech Academy of Sciences (RVO: 61388963), Czech Science Foundation (grant number: 20-13745S) and Ministry of Education, Youth and Sports (grant number: LTAUSA19120).