

New Molecules for Chemical Patterning

Molecular design and synthesis: S. Jasty, *Sigma-Aldrich*.

Chemical patterning: T. J. Mullen & P. S. Weiss, *Center for Nanoscale Science, Penn State*.

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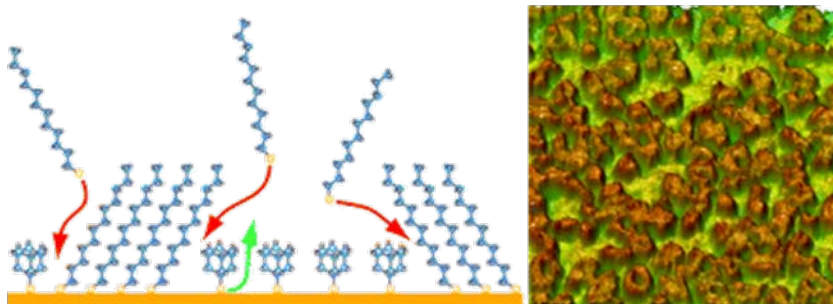
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Alkyne Cycloaddition
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e.g., J. Mullen, *et al.*, *App. Phys. Lett.* 90, 063114 (2007),
H. M. Saavedra, *et al.*, *J. Am. Chem. Soc.*, 129, 10741 (2007).

Ongoing NNIN-enabled research with Sigma-Aldrich is aimed at developing a library of molecules with a spectrum of intermolecular-interaction strengths for patterning of nanometer-sized features with molecular precision. Many new molecules are being synthesized and commercialized by Aldrich.

Penn State Site

Joint molecular design and commercial syntheses are opening new ideas and possibilities in chemical patterning for devices.