

Nanographenes by chemical synthesis in solution

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Chemical synthesis has become an useful method to prepare well-defined nanographenes.[1] This bottom-up approach avoids the structural inhomogeneity implicit in other methods to prepare graphene, and it provides access to nanographenes with different topologies and peripheries, a crucial feature to control the properties of these carbon-based material.

In this contribution we describe our efforts to prepare graphene molecules by chemical synthesis in solution (Figure 1).² Some of these molecules turn out to be especially suitable to be studied by NC-AFM with atomic resolution (Figure 2).³

References

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[3] L. Gross, F. Mohn, N. Moll, B. Schuler, A. Criado, E. Guitián, D. Peña, A. Gourdon, G. Meyer, *Science*, **337** (2012) 1326.

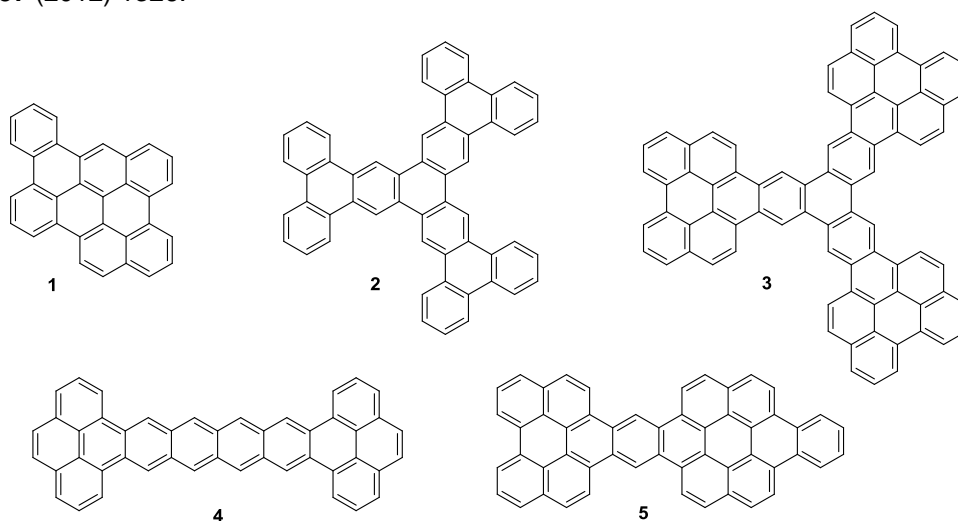


Figure 1. Some examples of nanographenes obtained by chemical synthesis in solution.

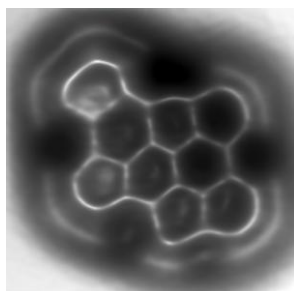


Figure 2. Nanographene 1 by NC-AFM (see ref 3 for details).