

## **Molecular Tectonics: from simple tectons to complex molecular networks**

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Molecular crystals are compact and periodic entities. They are defined by the nature of their molecular components and interactions between them in the solid state. Although a crystal is described by translation of the unit cell into three directions of space, one may describe it as networks by analysing intermolecular interactions taking place between molecules as specific recognition patterns. The approach dealing with such an analysis is called molecular tectonics since it leads to the definition of tectons. These construction units are structurally and energetically defined active molecular building blocks bearing within their backbone an assembling programme based on molecular recognition processes. The molecular programming leading to the formation of molecular networks with predefined dimensionality and connectivity is ensured by the nature and localisation of recognition sites within the structure of tectons.

The strength of molecular tectonics is related to the fact that not only it allows to describe a given crystal in terms of networks but, also and more interestingly, this approach allows to conceive molecular networks through the specific design of tectons.

A variety of tectons and molecular networks based on diverse intermolecular interactions will be presented.