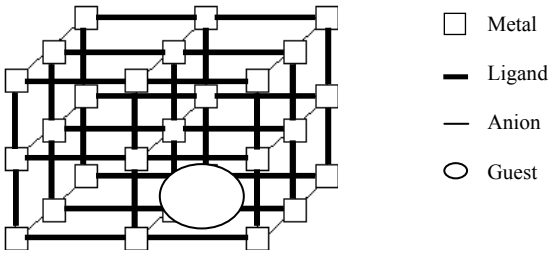
2-D and 3-D Metal-Organic Frameworks: A Crystal Engineering Approach

Déborah González Mantero, Antonia Neels, Fritz Stoeckli, Helen Stoeckli-Evans, *Department of Physical Chemistry, University of Neuchâtel, Switzerland.* E-mail: deborah.gonzalez@unine.ch

The synthesis of new metal-organic frameworks can be carried out by rational self-assembly using the principles of crystal engineering. Metal ions are usually coordinated to two or more bridging ligands giving a final semi-rigid structure suitable for adsorption, catalysis, etc. Nano-porous materials based on new linear ligands coordinated to metallic centers are presented and have been characterized by physical and chemical methods. These compounds have the general formula $[M(L)A]_n$ where M = Cu^{2+}, Co^{2+}, Ni^{2+}, L = 4,4'-bipyridyl, 4,4′-bipyridyl N,N′-dioxide and A = $S_2O_6^{2-}$, SO_4^{2-} [1].



[1] Neels A., Montse A., González Mantero D., Stoeckli-Evans H., *Chimia,* 2003, 619-622.

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