Laboratoire PPSM – UMR CNRS 8531

Photochimie et Photophysique Supramoléculaires et Macromoléculaires

Séminaire PPSM

Mardi 12 octobre 2021 - 15h00

Amphithéâtre Dorothy Hodgkin

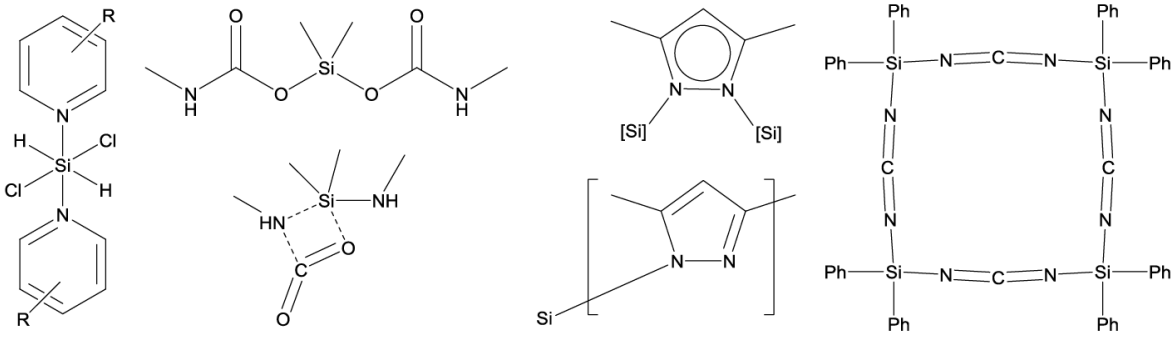
Professeur Edwin KROKE

Institute of Inorganic Chemistry, TU Bergakademie Freiberg, Allemagne

Invité par : Pierre Audebert

«Silanes with Si-N bonds – structures, reactivities and promising applications»

Very different silanes with Si-N-bonds are known. One class of compounds are pyridine adducts of chlorosilanes of the type py2SiClxR4-x. These adducts are used for controlled synthesis of e.g. alkoxysilanes and metal-free hydrosilylation. Another class of silanes with Si-N bonds are simple aminosilanes of the type RxSi(NHR')4-x, which insert quantitatively CO2 into the Si-N bond to form carbamoyloxysilanes. The latter can be used to synthesize silicones and - after a second silylation step - isocyanates. The group of pyrazolyl silanes are characterized flexible Si-N bonds with facile interchange reactions and corresponding equilibria. Finally, silyl carbodiimides will be introduced, where the N=C=N units may be considered as pseudo O atoms and Si(CH3)3 groups as pseudo H atoms.



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