First X-Ray Structures of Ethylene Bridged Neutral Dimeric Hexacoordinate Silicon Complexes with Tetradentate Salen-Type Ligands

Jörg Wagler and Gerhard Roewer

Institut für Anorganische Chemie, Technische Universität Bergakademie Freiberg, Leipziger Str. 29, D-09596 Freiberg, Germany

Reprint requests to Prof. Dr. Gerhard Roewer. Fax: (+49) 3731 39 4058.
E-mail: gerhard.roewer@chemie.tu-freiberg.de

Z. Naturforsch. **60b,** 709 – 714 (2005); received February 24, 2005

Syntheses and structures of two novel "doubledecker" silicon complexes [R-Si(*o*-O-*p*-OMe-C_6H_3-C(Ph)=N-$(CH_2)_2$-N=C(Ph)-C_6H_3-*p*-OMe-*o*-O)-CH_2-]$_2$ (R = Ph, *p*-*t*Bu-C_6H_4-O) with the silicon atoms hexacoordinated by two salen-type tetradentate ⟨*ONNO*⟩-chelating ligands are described. Hydrogen bonding between the halves of the bridged complexes as well as with chloroform solvate molecules determines the conformation. Compared with analogous mononuclear silicon complexes these "doubledeckers" show bathochromically shifted Vis-absorption.

Key words: Doubledecker, Hexacoordinate, Hypercoordination, Schiff Base, Silicon