ELECTROCHEMISTRY OF VARIOUS ORGANOSILICON DERIVATIVES

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1. Cyclic peralkylsilanes exhibit unique behavior, which distinguishes them from saturated cycloalkanes. The electrochemical behavior of seven cyclic derivatives with different ring size and different patterns of substitution.
[See for example: Z. -R. Zhang, J.Y. Becker and R. West, J. Organometal. Chem., **574**, 11, (1999)].

2. Disilenes are more reactive than their alklene counterparts. However, very little is known on the electrochemical behavior of disilenes. The results obtained by electrolysis of tetramesityldisilene, $Mes_2Si=SiMes_2$, involving both anodic oxidation and cathodic reduction, will be reported.
[See Z. -R. Zhang, J.Y. Becker and R. West, J. Chem. Soc. Chem. Commun. 2719 (1998)].

3. Siloles are the analogs of cyclopentadiene, furan, pyrrole and thiophene. The cyclic voltammetry of different siloles will be discussed, as well as the results obtained from the anodic electrolysis of 1,1-bis(trimethylsilyl)-2,3,4,5-tetraphenyl-1-silacyclopentadiene, under various experimental conditions.
[See Z. -R. Zhang, J.Y. Becker and R. West, J. Electroanal. Chem., **507**, 49-54, (2001)].

4. Silylenes (R_2Si:), the analog of carbenes, are key intermediates in many thermal and photochemical reactions of organosilicon reactions. The chemistry of stable divalent silicon compounds dates from 1986. Results of the electrochemical properties of two room temperature stable cyclic silylenes derivatives of imidazole-2-silylenes, will be described.
[see R. West, T. A. Schmedake, M. Haaf, J. Y. Becker and T. Mueller, Chemistry Letters, 68, (2001)].