

平成 29 年度第 5 回 VBL セミナー

5th VBL Seminar, 2017

日時：平成 29 年 12 月 14 日（木）11 時 00 分～12 時 00 分

場所：名古屋大学 理農館 SA321 号室

講師：Nikolay A. Semenov 上級研究員
(Novosibirsk Institute of Organic Chemistry (ロシア))
(VBL 外国人客員教員)

題目：1,2,5-Chalcogenadiazoles as effective electron acceptors: reduction into Radical-anions vs. formation of charge transfer complexes

要旨： 1,2,5-chalcogenadiazoles are of particular interest to the fundamental chemistry and its applications in materials science and biomedicine. The common property of heterocycles of this family is high positive electron affinity, which means these compounds are effective electron density acceptors. Chemical reduction (complete charge transfer) of the neutral 1,2,5-chalcogenadiazoles derivatives with various reducing agents yields thermodynamically stable Radical-Anions (RA), isolated in the form of thermally-stable salts. These RAs may be considered as promising building blocks for the synthesis of molecular based magnetic materials. Meanwhile, interaction with other electron donors such as TTF or certain anions (X^-) results in formation of neutral or anionic charge transfer complexes (partial charge transfer). The former shows some potential for the photovoltaic applications. The latter are formed via coordination of X^- to the chalcogen atom of heterocycle which leads to the changes in absorption spectra. This may be useful for the anion receptors/sensors applications. This talk will cover these two aspects of the redox reactivity of 1,2,5-chalcogenadiazoles with regards to their application.

問い合わせ先：

名古屋大学 大学院理学研究科 物質理学専攻
阿波賀邦夫

Tel: 052-789-2487, Fax: 052-789-2484

E-mail: awaga@mbox.chem.nagoya-u.ac.jp