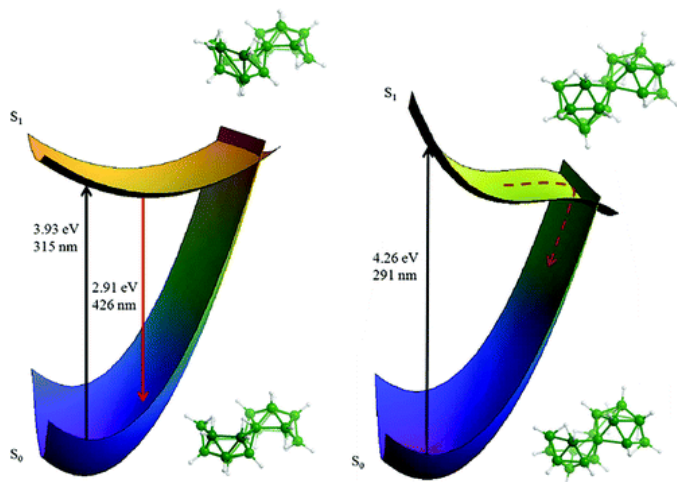


Srdečně tímto zveme všechny zájemce na přednášku Dr. Michaela Londesborougha
z Ústavu anorganické chemie AVČR v Řeži
na téma:

The Interaction of Light and Small Molecules with Certain Boron Hydrides

která se uskuteční **ve čtvrtek 09. 05. 2013 od 13:00** hodin na PŘF UJEP,
v učebně CN221, České mládeže 8, Ústí nad Labem.



The talk will focus on two main areas. The first is the discovery of the propensity of bimetallic boron hydride $[L_4M_2B_{10}H_{10}]$ cluster systems, such as $[(PMe_2Ph)_4Pt_2B_{10}H_{10}]$ shown in Fig.1, to reversibly capture small gaseous molecules such as O_2 , CO and SO_2 . This property is accompanied by a clear colour changes, and may be controlled via alterations in pressure or irradiation with UV light. Presented will also be the work on tuning this system to suit various criteria, and steps being taken towards the application of this property.

The second part of the talk will be focused on the recent work describing the fluorescent properties of the large boron hydride, $B_{18}H_{22}$. The photophysical properties of this compound are unique amongst the boron hydrides, and include a blue-light fluorescence under UV irradiation with a $\Phi=0.97$ quantum yield. In addition it has been found that the tuning of the photophysical properties of the highly fluorescent boron hydride cluster *anti*-isomer of $B_{18}H_{22}$ is possible by the straight-forward chemical substitution to produce $4,4'-(HS)_2$ -*anti*- $B_{18}H_{20}$, which facilitates intersystem crossing from excited singlet states to a triplet manifold. This subsequently enhances $O_2(^1\Delta_g)$ singlet oxygen production.

Přednáška bude vedena v anglickém nebo v českém jazyce podle přání posluchačů a je určena pro všechny zájemce, zejména pro studenty a pracovníky UJEP.

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