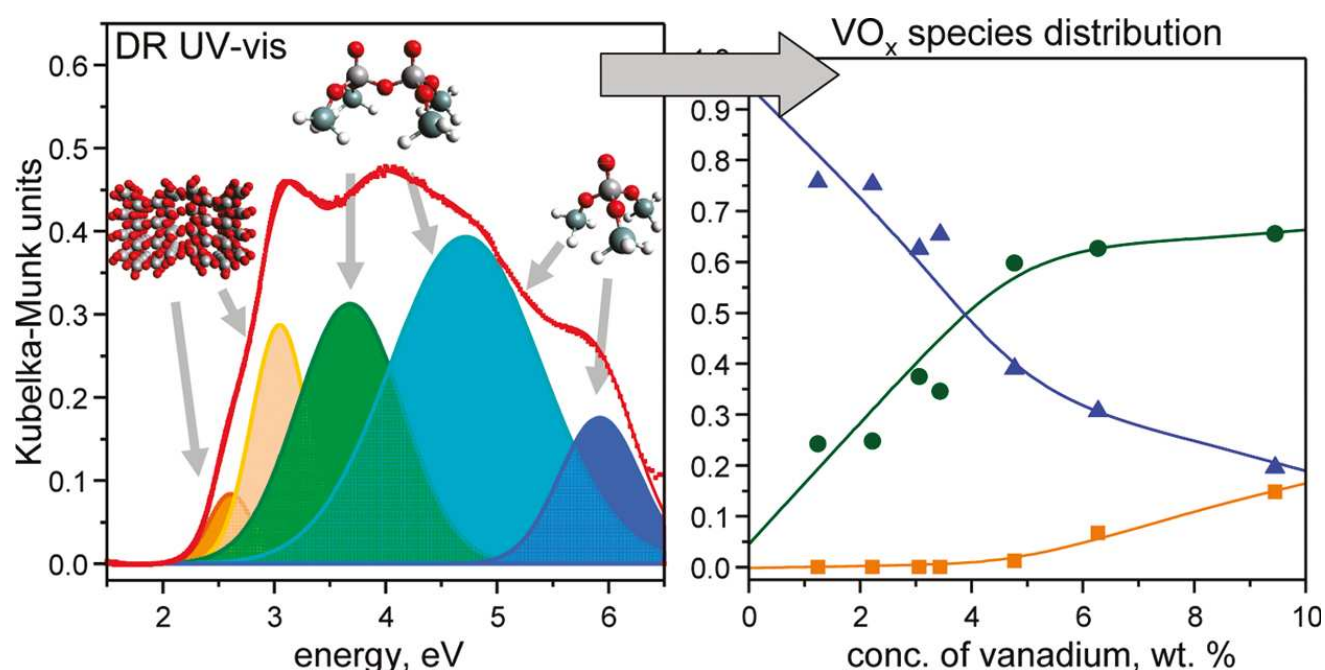


DR UVvis Study of the Supported Vanadium Oxide Catalysts

R. Bulánek, L. Čapek, M. Setnička,
P. Čičmanec

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Abstract: A new methodology of the measurement and evaluation of DR UV-Vis spectra of VO_x species supported on hexagonal mesoporous silica was developed. Suggested methodology utilizes benefit of the well resolved absorption bands in the spectra of highly diluted samples. Methodology was tested on two sets of V-materials prepared by the impregnation and direct synthesis method. It was observed that both types of materials consist of the same type of tetrahedrally coordinated monomeric and oligomeric species, but they differ in the population of these species. In particular, the octahedrally coordinated species and tetrahedral oligomeric units of higher polymerization degree were significantly more formed on the surface of V-materials prepared by impregnation method.