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The shell model for XPS quantitative analysis of layer thickness of supported nanosystems

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In order to estimate particle sizes and coverage for supported materials, a number of models have been proposed [1].Usually, the support has been represented by a stratified layer or number of layers with constant thickness.

In the case of the shell model a sample is considered to be a layer of spherical particles of a support. The example with Pt/SiO_2 catalysts have shown that the shell model can be used to study particle sizes (promoter layer thickness) of supported catalysts, when XPS intensities are known. The shell model is mathematically the most rigorous model in terms of approximations and simplifications, so that it is this model which should preferably be applied.

New programme for calculation can be used to study particle sizes (promoter layer thickness) of supported catalysts, when XPS intensities are known.

1. *Plyuto I.V., Shpak A.P.*. Characterization of disperse heterogeneous systems by X-ray photoelectron spectroscopy.//Naykova Dumka, Kyiv,.