

Study Group / Task Force Name: Nanoanalytics

Study Group / Task Force Members and Affiliations:

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Objectives:

The aim of the Nanoanalytics Task Force is to start a dialog within the analytical chemistry community on the concept of Nanoanalytics. There is however a need to explain in a clear way what Nanoanalytics does, what the outputs of Nanoanalytics are and what the terminology means.

- A definition of Nanoanalytics.
- A classification of Nanotechnologies.
- The scope of applications in Analytical Chemistry.

Activities and Outputs in 2015-2016 (e.g. reports, publications, seminars, meetings):

Publications and Meetings

Khlebtsov N., Khlebtsov B. Plasmonic SERS Substrates and Probes. LAP Lambert Academic Publisher, Saarbrucken. Germany. 2016. 142 p.

Passos M.L.C., Pinto P.C.A.G., **Santos J.L.M.**, Saraiva M.L.M.F.S., Araujo A.R.T.S. Nanoparticle-based assays in automated flow systems: A review. Anal. Chim. Acta. 2015. 889. 22-34.

Duffy E., Mitev D.P., Thickett S., Townsend A.T., Paul B., **Nesterenko P.** Assessing the extent, stability, purity and properties of silanised detonation nanodiamonds; Applied Surf. Sci. 2015. 357. P. 397-406.

Shtykov S.N. Nanoobjects and nanotechnologies as tools of nanoanalytics; 1-st Intern. school "Nanostructured materials" Saratov State Univ., Saratov, Russia, May 18-20, 2015, plenary lecture

Shtykov S.N. Two worlds of nanoobjects in chemical analysis: the differences, application and intersection points; Euroanalysis XVIII, the Eur. Conf. Anal. Chem., 6-10 Sept. 2015, Bordeaux, France.

Shtykov S.N. Self-assembling systems and phenomena in the chemical analysis; VIIIth Intern. Symp. "Design and Synthesis of Supramolecular Architectures" April 25-29, 2016. Kazan. Russia.

Shtykov S.N. Magnetic solid phase extraction based on magnetite nanoparticles in chemical analysis 26-30 Sept. 2016. Ekaterinburg, Russia.

Activities planned for 2016-2017:

- A definition of Nanoanalytics.
- A classification of Nanotechnologies.
- The scope of applications in Analytical Chemistry.
- Prepare a topical collection devoted "Nanoanalytics in "Analytical Bioanalytical Chemistry".
- Continue critical evaluation and discussing the current state-of-the-art and international activities in the field of Nanoanalytics area.

Report submitted by: Sergei Shtykov

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