

Laboratory of chemical surface analysis

(surface analyses of chemical composition of massive metal and ceramics, nano-composites, bio-materials and PVD coatings)

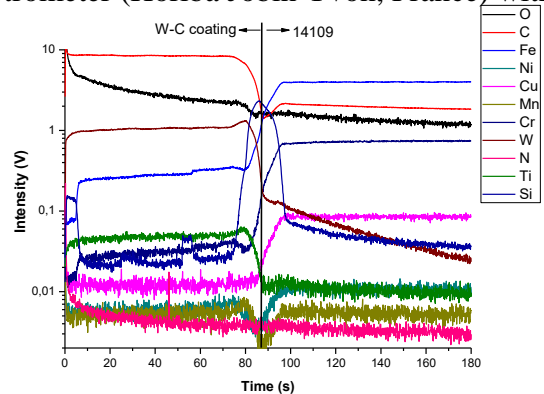
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The laboratory is focused on fast determination of the chemical composition of the surface and volume of solid materials, as well as on the depth profile analysis of the elements in a wide range of materials from metals to modern composite, nanocomposite and biological materials and coatings. The equipment in the laboratory enables experimentally simple and efficient quantitative and qualitative measurement of H, O, Cl, N, Nb, Cu, C, Zr, Ni, Co, P, S, Ti, Fe, Y, Mo, Ca, Al, La, V, Sr, Cr, W, Zn, B, Si, Mn, Hf, F and K in a wide range of solid materials, their changes during oxidation, corrosion, moisture effects, tribological wear and other processes starting from the concentrations at the level of several ppm, for the needs of the development of new technologies and investigation of the processes of their preparation and during operation..

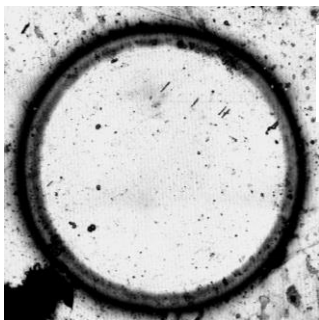
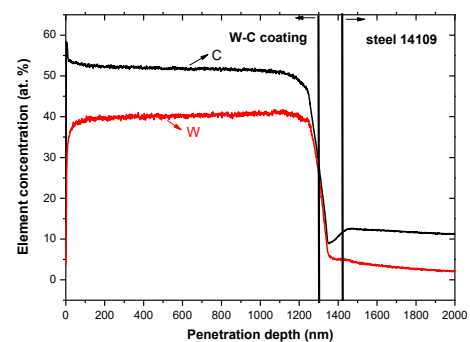
The laboratory is equipped with

GD - Profiler 2, glow discharge optical emission spectrometer (Horiba Jobin Yvon, France) with

- Polychromator - radius 0.5 m
- Monochromator
- Detectors for 31 spectral lines
- Nitrogen generator



Time and depth profiles of the distribution of elements in the W-C coating on a steel substrate



←
A crater after GDOES
measurement

→
A profile of the crater
after GDOES
measurement

