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ΣΕΜΙΝΑΡΙΟ



ΤΜΗΜΑ ΦΥΣΙΚΗΣ

1D nanomaterials: history and current developments

Νανο-υλικά σε μία διάσταση: η ιστορία τους και οι τρέχουσες εξελίξεις

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Nanomaterials are being classified in few classes regarding their dimensions, most often as 0D (spheres, clusters), 1D (linear, wires, fibers) 2D (films, membranes) and 3D (macromaterials possessing nanopores in various directions, such as activated carbon).

1D nanomaterials are particularly attractive from the point of view that they have been developed on similar principles as the textile fibers and quite often on basis of the similar technologies. Also quite often the textile technology departments of world famous universities have transitioned into the nanotechnology departments. The lecture will show the timetable of the development of the ultra-micro and super microfibers technologies and the subject will lead to the current state of the nanofibres and 1D nanomaterials in general, with special accent on the carbon nanotubes. The results obtained in collaboration between the University of Banja Luka, Republika Srpska and the Chiba University in Japan will be shown: adsorption treatments of the carbon nanotubes as the means of controlling their conductive and other properties and alternation in nanotubes structure caused by application of activators before their annealing will be shown. The still non-published data will be shown, as the idea for collaborative project with Aristotle University.

S. Gotovac Atlagić has graduated from the Faculty of Technology (1999) and completed her master in Human life and environmental sciences. She obtained her PhD in Science and Technology in Switzerland and Japan focusing on environmental nanotechnologies based on polymer, nanocarbon and nanometallic materials. She returned to Bosnia and Herzegovina in 2007 and started to work at the national Waste water laboratory in which she managed to completely modernize the analytics and get an ISO 17025 accreditation. Since 2015 she is at University of Banja Luka where she is now teaching at the Chemistry and Physics department. Her research interests remain the environmental nanotechnologies. Her group has pioneered in a very effective preparation of the high-quality metallic nanomaterials on the bases of the mining waste mostly. She is the representative of Bosnia and Herzegovina in the Scientific Committee of COST Association in Brussels (third repetitive mandate), the president of the Assembly of the Engineers of Technology in her country.

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