FIAS Frankfurt Institute for Advanced Studies

MesoBioNano Science

Meso-Bio-Nano Science Seminar

Title of the talk: **"Preparation of the electron/positron interactions data base as a unit of the nano-IBCT radiation damage data base"**

Speaker: **Dr. Bratislav Marinkovic**, Institute of Physics, University of Belgrade, Serbia

Date: 31th October 2012, Wednesday, 14:00

Venue: FIAS, room 00.200

Abstract

One of the objectives of the COST Action MP1002 Nanoscale insights into Ion Beam Cancer Therapy (Nano-IBCT) is to develop a new Database for radiation damage in biological systems which would cover several topical areas, one of them being the electron/positron interactions. In University of Belgrade, a team around the Laboratory for Atomic Collision Processes is developing a data base that would contain data on e- and e+ cross sections with atoms, metal vapour atoms and molecules, specifically those of biological interest. Many of these data had been obtained in our Laboratory. Data base has been constructed to be incompliance with the rules of VADMC (Virtual Atomic and Molecular Data Centre) and itsoutput would be files in txt and xsams format. At the seminar, the past results ofinformation system would be shown [1], a preparation of the new data base will beover-viewed [2] and brief presentation of experimental methods for the data collection [3] will be shown.

[1] V. M. Cvjetkovic, B. P. Marinkovic, and D. Sevic, "Information System in Atomic Collision Physics", in Advances and Innovations in Systems, Computing Sciences and Software Engineering, Ed. Khaled Elleithy, Springer, Dordrecht, The Netherlands (2007) pp. 485-490

[2] Bratislav P. Marinkovic, D. Jankovic, I. Maksimovic, D. B. Marinkovic, S. Djordjevic, M. Nešic, D. Radosavljevic, S. Conjagic, A. V. Yakubovich, M. Hanauske, A. V. Solov'yov, "Electron Interactions Data Base as a Step towards a Data Base for Radiation Damage in Biomolecular Systems", Regional Workshop on Atomic and Molecular Data (with Virtual Atomic and Molercular Data Center Introduction), Belgrade 14-16, June 2012

[3] S. D. Tosic, V. Pejcev, D. Sevic, R.P. McEachran, A. D. Stauffer, and B. P. Marinkovic, Nucl. Instrum. Meth. B. 279 53-57 (2012)

Prof. Dr. Andrey V. Solov'yov
Frankfurt Institute for Advanced Studies (FIAS)
Goethe University
Ruth-Moufang-Strasse 1, Office 02.102
60438 Frankfurt am Main
Germany

Tel.: +49-(0)69-798 47507
Fax: +49-(0)69-798 47510
E-mail: mbn@fias.uni-frankfurt.de
http://www.fias.uni-frankfurt.de/mbn