Journal of X-Ray Science and Technology 13 (2005) 107–108
IOS Press

Announcement

A Special Issue on Nanostructure Glass Technology for X-ray Optics and Biophotonics

The nanostructure glass technology provides the manufacturing of high precision glass products, including 3D microstructures with a few nanometers size. The products based on nanostructure glass are widely used in the following fields of science and technology: *microstructure fibers* (holey fibers, photonic crystal fibers), which present the new type of optical waveguides with the properties of special interest for many urgent problems of modern optics, laser physics, photonics, telecommunication, and biophotonics; *x-ray optics* for guiding and focusing of x-ray and other ionizing radiation; *micromechanics* – production of micro-motors and other electromechanic elements; *electronics* – production of liquid crystal and gas-discharge plasma display panels and other optoelectronic and display devices, including x-ray imaging; *fiber optics systems* – production of connectors and microstructure fibers; *chemistry and medicine* – production of the capillaries and micro-filters, biochips technology.

In science and technology of ionization radiation these devices are used for guiding, focusing, collimating and controlling of x-ray and neutron radiation. X-ray systems based on the glass polycapillary structures are used effectively for x-ray fluorescence analysis of different materials, chemical composition, and biological structures. Polycapillary structures with new geometries are effectively used in microdiffractometry, in micro x-ray fluorescent analysis, in x-ray photoelectron spectroscopy, and in x-ray lithography.

This special issue of the *Journal of X-Ray Science and Technology* will be devoted to the latest achievements in the nanostructure glass technologies. It will cover topics in a broad range including basic research, technology and applications of polycapillary structures for ionizing and none-ionizing radiation guiding and focusing, fluorescence excitation, diffractometry and spectroscopy. One of the priorities of the special issue will be discussion of biomedical applications of the developed technologies. This special is expected to be published in 2005.

Submission: All authors should submit their manuscript electronically the guest-editors.

SPECIAL ISSUE GUEST-EDITORS:

Valery V. Tuchin, Saratov State University, Russia
E-mail: tuchin@sgu.ru

Norbert Langhoff, Institut fur Geratebau, Germany
E-mail: langhoff@ifg.teleport-berlin.de

The Journal of X-ray Science and Technology is published by IOS Press (http://www.iospress.nl).
It is abstracted/Indexed in: Chemical Abstracts, COMPENDEX PLUS, EBSCO's database, INSPEC database, MasterFILE, PaperChem, SCOPUS