

エクストリームフォトンクスセミナー

Extreme Photonics Seminar

日時: 平成21年 7月 7日(火)
15:00 ~ 17:00, July 7th(Tue), 2009

場所: 研究交流棟5階会議室 W524
Cooperation Center, 5F Meeting Room, W524

題目: **軟X線結像鏡用の多層膜成膜技術の開発**
“Development of the Multilayer Deposition Technique for the Soft X-ray Imaging Mirror”

講師: **原田 哲男 氏** (兵庫県立大学 高度産業科学技術研究所 助教)
Dr. Tetsuo HARADA (Laboratory of Advanced Sci. & Technology for Industry, Univ. of Hyogo)

要旨: Multilayer deposition is a key technology for the normal incidence optics in the soft X-ray region. A soft X-ray microscope is attractive for biological sample observation in the water window region (wavelength ~ 2.3 nm) or the carbon window region (~ 4.4 nm). The Schwarzschild optics composed of two spherical multilayer mirrors has high numerical aperture and large field of view, which is capable for a practical microscope in a laboratory. However, the bandwidth of the water window and carbon window multilayer is less than 0.5%, and the reflection peak wavelength of the multilayer is depends on period thickness and the angle of incidence. Precious control of the period thickness distribution on each spherical mirror is essential to achieve practical throughput. I will introduce developments of the period thickness control, a high reflective multilayer of the carbon window region and a narrow bandwidth multilayer, which have been developed in Yamamoto laboratory of Tohoku university..

題目: **パルスレーザー誘起核スピン偏極**
“Nuclear-spin polarization induced by laser pulses”

講師: **中嶋 隆 氏** (京都大学エネルギー理工学研究所 准教授)
Prof. Takashi NAKAJIMA (Institute of Advanced Energy, Kyoto Univ.)

要旨: 我々のグループではパルスレーザーを用いて核スピン偏極を実現する研究を進めている。本講演ではパルスレーザーを用いたスピン偏極の原理を述べた後、我々がこれまで得た理論的および実験的結果を紹介する。

We have been working on a new scheme to polarize nuclei using laser pulses. In this talk we will first explain the principle of nuclear-spin polarization, and then present some of the theoretical and experimental results we have obtained so far.