Post doctoral position open in Laboratoire de Chimie de la Matière Condensée/
Laboratoire Aimé Cotton, Paris, France
Duration: 12 months
Date: Applications must be submitted before March 1, 2007 to start mid 2007
Monthly salary: 2100 euros net

Contact:  Dr. Philippe Goldner
Laboratoire de Chimie de la Matière Condensée de Paris CNRS-UMR7574
Ecole Nationale Supérieure de Chimie de Paris
11, rue Pierre et Marie Curie, F-75005 Paris, France
Tel. 01 53 73 79 30
Email: philippe-goldner@enscp.fr

New Er doped crystals for optical information processing

Rare earth ion doped crystals are well adapted to optical information processing. Applications include optical processing of wideband radiofrequency signals and quantum information processing. Erbium is particularly interesting because of its optical transition in the telecom window and its long coherence time. Besides, its magnetic properties make it attractive for quantum information manipulation.

New crystals are being investigated in order to optimize the properties required for the above applications. The project includes the characterization of these new crystals using EPR and optical coherent spectroscopy and their use in original optical processing experiments.

The project involves the Laboratoire de Chimie de la Matière Condensée de Paris, with a large expertise in crystal physics and synthesis, EPR and optical spectroscopy, and the Laboratoire Aimé Cotton, specialist of optical coherent transient techniques and applications.

The candidate should have a PhD in physics or material science. Experience in coherent transients, spectral holeburning, or EPR would be a plus.