

Post-doctoral position in optics, optical materials and spectroscopy at Colorado State University in Fort Collins, CO, USA

We invite applications for post-doctoral positions in the group of Prof. Carmen Menoni in the Department of Electrical & Computer Engineering at Colorado State University. Our research focuses in understanding fundamental properties of amorphous oxides, which are key components in optical interference coatings in state-of-the-art lasers and ultra-stable optical cavities. We investigate structural and optical properties of these materials and their multilayers. As part of the Laser Interferometer Gravitational Wave Observatory (LIGO) international collaboration our group has been investigating novel amorphous oxides for the coatings of these ultra-sensitive interferometers in which internal friction in the coatings is a key limiting factor. We have unique capabilities to grow these materials by ion beam sputtering and to study their structural and optical properties with multiple techniques, some of which are developed in our lab.

The post-doctoral student will gain a broad experience in the optics and material science of amorphous materials. The post-doc will have ample opportunities for professional development, including participating at conferences, in the LIGO Optics Working Group workshops and meetings where the candidate will be able to interact with a large group of scientists and engineers at CSU and those within the international LIGO Optical Working Group. The post-doc will also be able to participate in LIGO campaigns at one of the US sites. Post-docs in Menoni's group are very successful in finding rewarding job opportunities in academe, industry and research laboratories worldwide.

For more information about the scope of the research and recent publications visit:

www.lasers.colostate.edu

To inquire about this opportunity please write to Prof. Menoni at carmen.menoni@colostate.edu.

Colorado State University is located in Fort Collins, CO, a community of about 165,000 located at the foothills of the Rocky Mountains. Fort Collins enjoys a fantastic weather, which allows all-year around outdoor activities, like biking and skiing. In 2029, Fort Collins was rated as the No. 1, Best Places to Live in America by Market Watch. <https://www.fcgov.com/visitor/>

(1) Ion beam sputtering

(2) Thin film amorphous oxides and multilayers

(3) Coatings for the end-test masses of gravitational wave interferometers

GW190521 – May 21, 2019
 Detection of the most massive black hole merger, one of the most distant gravitational-wave sources detected so far (LIGO/VIRGO)

FROM PROCESS → MATERIALS → COATINGS OF THE MIRRORS IN THE MOST SENSITIVE AND SOPHISTICATED GRAVITATIONAL WAVE INTERFEROMETERS