

Ph.D. Course in Materials Science and Nanotechnology

University of Milano-Bicocca, Department of Materials Science, via Cozzi 55, 20125 Milano

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Room U9 - 09

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Twenty-five years of optically stimulated research of artificial materials: a personal perspective

Research on optically stimulated luminescence (OSL) of artificial materials has transformed the field of passive radiation dosimetry in the last 25 years. Today OSL is commercially used in personal radiation dosimetry in several continents, and active research is carried out worldwide on the underlying trapping and recombination processes of commercial luminescence materials and on the development new materials. In addition to personal and environmental dosimetry, OSL dosimetry also plays a role in quality assurance in medical applications (diagnostic radiology and radiation therapy) and space dosimetry. In this talk we will provide a personal perspective of the advances achieved in field in the last quarter of a century, from the development of $\text{Al}_2\text{O}_3\text{:C}$ and the identification of BeO as dosimeters in the 90's, until the development of new luminescence materials with properties tailored for OSL dosimetry and new applications. Unexplored potentials and challenges in the area will also be discussed.

PhD students and all interested in the seminar are kindly invited to participate.

The PhD Coordinator
Prof. Marco Bernasconi