

PROF. NICOLA ROSATO

Born: March 12, 1954, Sant'Eusanio del Sangro, Chieti, Italy

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Education: Degree in Physics, (1978), Pisa University

Dissertation Title: "Structure-Function Relationship in Polymers"

Postdoctoral Experience:

From February, 1980 to February, 1981, N. Rosato worked as recipient of a CNR fellowship, in Orléans, at the Centre de Biophysique of the CNRS, in the laboratory of Dr. Philip Wahl, on the optical spectroscopy of proteins.

From October, 1981 to November, 1981, N. Rosato worked, as invited scientist, in the laboratory of Prof. Enrico Gratton, University of Illinois at Urbana-Champaign, USA, on the protein fluorescence with the phase-shift techniques.

From December, 1981 to September, 1983, N. Rosato worked, as recipient of a CNR fellowship, at the Istituto di Biofisica, Pisa, on the fluorescence of biological molecules.

From September, 1983 to April, 1985, N. Rosato worked, as University Researcher, at the Dept. of Physics, Pisa, on the biophysical applications of the optical spectroscopy.

During 1984, N. Rosato taught General Physics I at the Faculty of Engineering of the University of Pisa.

From May, 1985 to March, 1988, N. Rosato worked, as CNR Researcher, at the Centro di Biologia Molecolare of the CNR, Roma, on the time resolved fluorescence of proteins.

From July, 1988 to August, 1988, N. Rosato worked, as consultant, in the Laboratory of Fluorescence Dynamics of Prof. Enrico Gratton, University of Illinois at Urbana-Champaign, USA.

From April, 1988 to December 1990, N. Rosato, worked, as Associate Professor, at the Department of Experimental Medicine and Biochemical Sciences, Medical School, Università degli Studi di Roma "Tor Vergata" teaching Experimental Biochemistry.

From December, 1990 to March 2000, N. Rosato has been put in charge of the Chair of Biophysics in the above University teaching Biophysics, Medical Informatics and Biochemistry.

N. Rosato collaborated to the realisation of a facility to use synchrotron radiation in biophysics at Frascati.

From March 2000, N. Rosato is Full Professor in Biochemistry in the Faculty of Medical Engineering.

From December 2002 N. Rosato is Director of the Medical Engineering Service in the "Tor Vergata" University Hospital.

Fields of interest: structure and function of biological macromolecules under high pressure and electromagnetic field. Application of optical spectroscopy and Near Infrared Spectroscopy "in vivo". Smart nanomaterials in biology and medicine. Medical devices.

Publications:

N. Rosato is author of about 90 scientific publications on international journals, in the fields of optical spectroscopy of biological molecules, fluorescence instrumentation, medical informatics and bionanotechnology.

Invited Seminars:

N. Rosato has been invited for about 40 seminars in various universities, schools and meetings.

Research projects:

- 1) Structure and dynamics of proteins, membranes and cells with two-photon excitation confocal microscopy
- 2) Single molecule spectroscopy and intracellular particle tracking with fluorescence correlation spectroscopy
- 3) Hydrogel nanospheres for drug delivering
- 4) Functionalized carbon nanotubes for biomedical applications
- 5) In vivo near infrared spectroscopy
- 6) Non thermal effects of radiofrequency on emolysis
- 7) RFID as biosensors for security and safety