

In memoriam
Professor Dr. PAOLO NANNI
(1941-2016)



It is great sadness to hear of the loss of Prof. Paolo Nanni. The colleagues will remember him with great fondness, and his work will live on, both in the legacy of the group that was built around him and in the memory of his numerous colleagues, friends and former students. Professor Paolo Nanni passed away after a serious illness on 14th July 2016. He was born in Rome, Italy on July 8, 1941. He graduated in 1966 in Industrial Chemistry at University of Genoa, Italy and received PhD at University of Genoa, Italy in 1971, in the field of spectroscopy.

Paolo Nanni achieved his Post-graduate fellowship of Consiglio Nazionale delle Ricerche, Genoa in the period 1966–1967, NATO junior and senior fellowships in 1971 at National Physical Laboratory, Teddington, UK and 1974 at University of Manchester/UMIST, UK. He was Professor in Chemistry at the University of Genoa, Faculty of Engineering (from 1985 to 2013) and associate to the Institute of Physical Chemistry of Materials (later Institute of Energetics and Interphases) of Italian National Research Council-CNR (from 1967 to 2016).

Prof. Paolo Nanni was the Head of Ceramic Material Laboratory from Institute of Physical Chemistry of Materials of Italian National Research Council-CNR (from 1991–1998) and Scientific Officer of CNR (from 1968–1985). He was Member of Professors Council for PhD School in Science and Technology of Materials, advisor of PhD theses, post-docs, graduation, Master degree theses and Scholarships and Member of Jury for several PhD theses in Italy, France, Switzerland, Spain, Germany, Portugal, Romania, New Zealand.

It was well known his high involvement in the na-

tional, international scientific and public activities. He was an active promoter of international collaborations with groups from Romania, Spain, France, Switzerland, Canada, Portugal, Germany, Lithuania, Poland, Ukraine, Sweden, Serbia, USA, etc. Prof. Paolo Nanni was the team coordinator of the Strategic Projects on Innovative Materials, funded by CNR (1995–96), team coordinator of the project on innovations in products and processes for oxide perovskite ceramics, CNR Targeted Projects (1998–2001), and of the project of National Interest of the Italian Ministry of Education (2002–2003), project coordinator of the Italian Space Agency (2000–2003), team coordinator of a Research Group in the frame of the national project “*Preparation and characterisation of perovskite-like oxides for Solid Oxides Fuel Cells (SOFCs)*” (2005–2008), coordinator of the European project POSDRU funded by European Social Fund Italy-Romania (2010–2013). He was appointed as Italian Government representative in projects of European Cooperation in Science and Technology-COST, as COST 525 (*Advanced Electroceramics: Grain Boundary Engineering*), COST 539 (*Electroceramics from Nanopowders Produced by Innovative Methods - ELENA*) and COST MP0904 (*Single and Multiphase Ferroics and Multiferroics with Restricted Geometries - SIMUFER*) Actions, he was Working Group coordinator in COST 539, Grant Holder responsible for the COST MP0904, Chairman of the COST 525 meeting on “*Dielectrics and Semiconductors*” (2002), organizer of the COST 525 Training School “*Grain-Boundary Related Phenomena in Ceramic Materials, from Micro-to Nano-Scale Dimen-*

sions” (2005), Chairman of the COST 539 Workshop “Fabrication, Properties and Applications of Electroceramic Nanostructures”, Genoa (2008), organizer of the MP0904 Training school for young researchers “Nanostructured Oxides: from Laboratory Research to Industrial Application” and of the MP0904 Final Conference in Genoa (2014).

Prof. Paolo Nanni was the Chairman of 7th European International Conference of Ceramic (2000), Member of International Advisory Board of the ECerS Congress Electroceramics VIII (2002), IX (2004), X (2006) and XI (2008), representative of Liguria region in the Scientific committee of European Inter-regional Conferences on Ceramics CIEC (2004–2012) and Member of the International Advisory Committee of Electroceramics conferences (2000–2014). Due to its considerable scientific reputation, he was elected as the member of the Editorial Board of International Journals *Processing and Application of Ceramics* and *Material Chemistry*, he was referee of national projects of the Italian Ministry of Education, Universities and Research foundations, scientific projects of the Ministry of Science and Environmental Protection of the Republic of Serbia, Romania, Ukraine, and permanent referee of few scientific journals, as *J. Am. Ceram. Soc.*, *J. Eur. Ceram. Soc.*, *J. Phys. Chem.*, *Mater. Chem. Phys.*, *Appl. Phys. Lett.*, *J. Electroceram.*, *J. Mater. Sci.*, *Int. J. Appl. Ceram. Tec.*, *J. Appl. Phys.*, *Phys. Rev. B*, etc.

His scientific interest was related to chemical synthesis of oxide nanoparticles with controlled size and morphologies by innovative methods; investigation of the functional properties of nanostructured electroceramics in relationship with their nano/microstructural characteristics and in particular, studies of grain size and grain boundary-related phenomena in ferroelectrics. He has published more than 150 papers and book chapters, with more than 3000 citations. Among them, about 1000 citations refer to the studies dedicated to grain size effects in BaTiO₃ nanocrystalline ceramics published in a few prestigious journals. Prof. Paolo Nanni’s group and his collaborators published probably one of the most important study concerning the grain size effects in barium titanate (*Phys. Rev. B*, 2004). As Prof. C.A. Randall from the Pennsylvania State University pointed out, in this work extremely high quality powders have been

produced and then consolidated into ceramics with well-controlled grain sizes and high density. This then enabled a comprehensive experimental study to separate out trends in the dielectric characteristics and phase transition behavior over materials with grain sizes between micron and nanometer scales. There are very important lessons learned from this data that guide the future development of multilayer ceramic capacitors.

It is well known that Prof. Paolo Nanni spoke several languages and possessed a fantastic ability to be totally relaxed in communicating and moving from one language to another. He was a connoisseur in many fields, from history and literature to painting, culture and music. He adored his native country, Italy, but he has been a citizen of the World, as well. He liked a lot to host foreign researchers, to organize conferences and meetings and to share with the international guests the history, culture, habits and cuisine of his town, during the guided visits in Genoa.

Although hard-worker, he was never tired, and he was always relaxed and ready to discuss with colleagues and students. His collegial respect, intellectual capability, interesting and useful discussions at the meetings or in informal ambient during the conferences, were nothing less than fascinating. His optimistic approach to life, an outstanding opening towards collaborations on a fair base and respecting the background, value and sensitivity of every collaborator, his effective support of young researchers and scientists from less developed countries in collaborations and projects, his sharp mind and his extensive background knowledge were well known and highly appreciated by the scientific community. A major characteristic of Paolo Nanni’s personality and culture was to put the friendship and warm human rapports above the scientific production, in all his collaborations. Because of this and much more that has not been said, Paolo will be sadly missed not only by his beloved family, but also by his friends and colleagues.

Prof. Biljana Stojanović
Prof. Vladimir V. Srdić