

Profile 1

Alida Bellosi

Director, The Institute of Science and Technology for Ceramics (ISTEC)
National Research Council of Italy (CNR)
Via Granarolo 64
48018 Faenza
Italy

e-mail: alida.bellosi@istec.cnr.it
telephone: +39 0546 699712



Alida Bellosi in the laboratory in 1980.

Birthplace

Castel Bolognese (in the Province of Ravenna), Italy

Born

January 13, 1952

Publication/Invention Record

>150 publications: h-index 30
4 patents, editor of 7 books

Proudest Career Moment (to date)

Appointment as Director of ISTEC-CNR, Institute of Science and Technology for Ceramics, belonging to National Research Council of Italy (CNR).

Academic Credentials

Ph.D. (1988) Physical Chemistry, National Competition for Title/Degree, Italy.
M. Degree (1974) Physics, Bologna University, Bologna, Italy.

Research Expertise: oxide and non-oxide-based ceramics (nitrides, borides, carbides, and related composites), forming and sintering processes, oxidation and corrosion resistance of structural ceramics, joining dissimilar materials, materials design and engineering

Other Interests: evaluating and discussing collaborative programs, editing books and proceedings, training of young scientists, scientific organization of congresses and schools

Tags

- ❖ Administration and Leadership
- ❖ Government
- ❖ Domicile: Italy
- ❖ Nationality: Italian
- ❖ Caucasian
- ❖ Children: 2

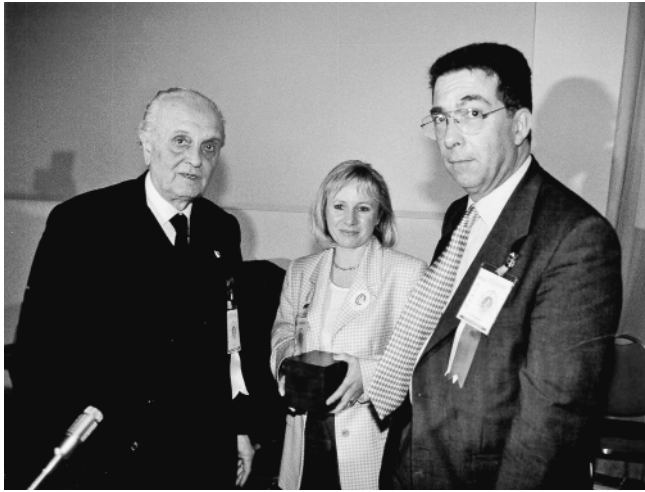
Key Accomplishments, Honors, Recognitions, and Awards

- Stuijts Award from the European Ceramic Society, 2015
- Elected Fellow of the European Ceramic Society, 2013
- Elected Fellow of the American Ceramic Society, 2013
- Promoter and Organizer of MiMe—Materials in Medicine International Conference, Faenza, 2013
- Promoter and Co-Chair of CERMODEL 2013—Modelling and Simulation Meet Innovation in Ceramics Technology, International Congress, Trento, Italy, 2013
- Chairperson of the Working Group “Research and Development” of the European Ceramic Society, 2010–2013
- Member for the International Advisory Committee of CICECO—Centre for Research in Ceramics and Composite Materials, Aveiro, Portugal, 2008–2011
- Selected by the Italian Ceramic Society for the role of Chairperson of the 2nd International Congress on Ceramics (ICC2), Verona, 2008
- Co-Chair of the Meeting “Ultra-High Temperature Ceramics: Materials for Extreme Environment Applications,” Engineering Conferences International, Lake Tahoe, USA, 2008
- Scientific Coordinator for the bilateral agreement between ISTEK and Shanghai Institute of Ceramics, Shanghai, China. Project on processing and characterization of ultra-high-temperature ceramics, 2007–2010
- Scientific Coordinator for the bilateral agreement between ISTEK and Institute of Inorganic Chemistry, Bratislava, Slovakia. Project on the development of structural ceramics, 1997–2007
- Member of the Editorial Board of Materials Letters, Elsevier since 2008
- Member of the Scientific Committee of the Department “Manufacturing Technologies” of CNR, 2006–2011
- Member of the “Technical and Scientific Committee” of ASTER, Emilia Romagna Region, Italy, 2006–2009
- Award for 2nd place in the poster presentation, “Microstructure and properties of porous SiC templates from soft woods” at the “8th International Conference on Ceramic Processing Science” in Hamburg, 2002



Alida Bellosi at the Conference “Engineering Ceramics”, NATO ASI Series in 1996 in Slovakia.

- Award for 3rd place in the poster presentation, “Microstructure and properties of ultrafine SiC produced through liquid phase sintering of nanopowders” at the “8th International Conference on Ceramic Processing Science” in Hamburg, 2002
- Award for 2nd place in the presentation, “Fabrication of Al₂O₃-SiC nanocomposites” at the “2002 Conference on Advanced Ceramics and Composites” in Cocoa Beach, 2002
- Coordinator of the Section “Advanced Ceramics Processing Technologies” in the frame of the National Targeted Project on Advanced Materials, 1989–2000
- Evaluator of national and regional projects in Italy, 1998–2013
- Expert of the European Commission for the Evaluation of Proposals, 2001
- Director and Scientific Organizer of the NATO Advanced Research Workshop “Interfacial Science in Ceramic Joining,” Bled, Slovenia, 1997
- Congress Chair of the IV European Ceramic Society Conference: Meeting and Exhibition, Riccione, Italy, 1995
- Acknowledgment of the European Ceramic Society for the role of “Congress Chair” of the IV European Ceramic Society Conference: Meeting and Exhibition, Riccione, Italy, 1995
- Co-Chair of Special Session “Modern Applications of Electron and Scanning Probe Microscopy to Ceramics,” IV European Ceramic Society Conference, Riccione, Italy, 1995
- Co-Chair of the Short Course “Advanced Techniques for Surface Analyses of Ceramic Materials: Theory and Applications,” in the frame of the IV European Ceramic Society Conference, 1995
- Scientific Organizer of the Workshops “Hexagonal Initiative, Italy/Europe” and “Workshop Italy/USA,” Rimini, Italy, 1992
- Scientific Organizer of the International Congress CERMAT '92, Rimini, Italy, 1992
- Member of the Italian Delegation at International Bilateral Meeting on New Ceramics, between UK and Italy, promoted by CNR and Materials Commission Science and Engineering Research Council, 1990



The award ceremony during the 4th International Conference of ECerS. The award is given to Alida Bellosi as Chairperson of the Conference, by the President of the Italian Ceramic Society Prof. Leopoldo Cini (left-hand side) and by the President of the European Ceramic Society Dr. Gian Nicola Babini (right-hand side).

Biography

Early Life and Education

Alida Bellosi was raised in Italy by Italian parents; she has two sisters and one brother. They lived in the fertile countryside of Romagna until she was about 25 years old. She received her early education in the public schools and continued with the higher school education at the Liceo Scientifico in Faenza, where she graduated in 1970.



Alida Bellosi is congratulated at the degree ceremony after completion of her thesis dissertation, University of Bologna, 1974.

She carried out her undergraduate studies at the University of Bologna, Faculty of Physics, where she received the Degree (equivalent to the current Master's Degree) in Physics, *summa cum laude*, on July 22, 1974. At that time, doctoral courses/programs had not yet been established in Italy. The Ph.D. program began in 1985—at the start, scientific researchers participated in a National Competition. Based on her qualifica-

tions and examination results, Alida Bellosi received her Ph.D. in Physical Chemistry in 1988.

From 1974 to 1975, she served as a volunteer researcher at the Research Unit National Group on Materials Structure, Institute of Physics, University of Bologna. In 1976, she joined the National Research Council of Italy, in the role of scientific researcher, at the Institute of Science and Technology for Ceramics, in Faenza.

In 1977, she got married. She is now the mother of two children: Daniela (1981) and Alberto (1985).

Career History

Since 1976, as a researcher at ISTEC, Alida Bellosi has been the coordinator of research projects, responsible for the management of scientific laboratories, and the reference scientist for research contracts. Her technical expertise is in new ceramic materials (oxides, non-oxides, and composites) for structural, electrical, and biomedical applications. She has held some key positions within ISTEC. For example, she has served as Head of research projects on innovative ceramic engineering applications, Head of the Laboratory of Electron Microscopy and Microanalysis, Coordinator of ~30 research contracts and activities with third parties and companies, and Principal Investigator of research projects within national programs and of research groups within European projects. In addition, she has been responsible for

collaboration activities with several international institutions and the management–organization–assessment of programs and collaborations at national and international level. Scientific activities on the development and characterization of new materials for innovative applications have been carried out in coordination with other international activities, and accompanied by various initiatives and commitments aimed at ensuring the contribution and participation of ISTECH in the international scenario of new materials.

Alida Bellosi has devoted considerable effort to the implementation of initiatives related to training of students and young scientists at all levels. She has personally contributed to teaching in various venues and has collaborated in the organization of professional courses and schools of specializations on advanced materials. Some significant examples include teaching (seminars/lectures in schools, master classes, and university courses), mentoring (fellows, young researchers, and guests), co-tutoring undergraduates, graduate students, and interns, serving as a member of doctoral dissertation committees, and organizing schools, seminars, workshops, and conferences.

She has carried out numerous initiatives related to the promotion of research and the integration with other local, national, and international contributions, aimed primarily at supporting innovation. She has presented keynote and invited talks at ~40 conferences and international symposia and has acted as co-chair of several congresses.

Alida Bellosi established a strong collaboration network of relationships with many universities, nationally and abroad in the United States, France, Belgium, The Netherlands, Slovak Republic, Venezuela, China, Vietnam, Indonesia, and Japan.

3 Most Cited Publications

Title: Processing and properties of zirconium diboride-based composites

Author(s): Monteverde, F; Bellosi, A; Guicciardi, S

Source: Journal of the European Ceramic Society; volume: 22; issue: 3; pages: 279–288; published: March 2002

Times Cited: 218 (from Web of Science)

Title: Advances in microstructure and mechanical properties of zirconium diboride based ceramics

Author(s): Monteverde, F; Guicciardi, S; Bellosi, A

Source: Materials Science and Engineering A—Structural Materials: Properties, Microstructure and Processing; volume: 346; issue: 1–2; pages: 310–319; article number: PII S0921-5093(02)00520-8; published: April 15, 2003

Times Cited: 215 (from Web of Science)

Title: Oxidation of ZrB₂-based ceramics in dry air

Author(s): Monteverde, F; Bellosi, A

Source: Journal of the Electrochemical Society; volume: 150; issue: 11; pages: B552–B559; published: November 2003

Times Cited: 135 (from Web of Science)

ResearcherID (B-6167-2014)

Challenges

These are the major challenges in my career:

1. It was challenging to attend university and obtain a degree with honors in the shortest academic time. At that time, it was not easy for young students living in the countryside to attend the university because of the personal sacrifices (associated with the family supporting the necessary costs) and poor transportation; i.e., a daily journey by train was made from home to Bologna early in the morning, which then returned late at night.
2. Finding the right conditions to build a career in science while working at ISTECCNR has been challenging. Over the years, I have held positions of head of laboratories, research projects of numerous contracts with companies, and groups of units in several European, national, and regional programs. I have collaborated with research groups in many countries, and I played an active role within the European Ceramic Society.
3. I was appointed Director of ISTECCNR: it was a challenge for me to collect the qualifications and merits to be admitted to the competition for this role as Director. The role of Institute Director constitutes the top level in the command structure of the National Research Council of Italy; above, there is only the centralized governance in the CNR headquarters in Rome. CNR is the major public organization for research in Italy. The Institute Director (one hundred positions at national level for one hundred institutes) has full responsibility of the research structure (s)he is leading: for the scientific activities, all of the legal and administrative aspects including personnel, building, goods, and assets, and for the financial management and strategic decisions and policy for the development of the Institute.

On being a woman in this field . . .

In both the roles of a scientific researcher and Institute Director, I did not experience problems based on being a woman in this field. I did not suffer from overt discrimination, nor did I resent it, if sometimes I did not see my efforts recognized thoroughly. The limiting factor for moving forward in my career (more quickly) was having children. Having a family brings responsibilities and commitments that are associated with hard work and many sacrifices: the freedom to manage my own time and the scheduling of my own days has been affected significantly by being a mother. And for some of the critical years as a mother, my job performance and accordingly my career prospects suffered some setbacks. But I have no regrets, it was worth it—I would do it again. I would choose to have a family, even though this extra “burden on my shoulders” has left its mark on me, personally, and on the output from my job. I’m sure I could have done more in my career without the constraints and responsibilities of having a family, but I’m very happy with my choice. I recognize that I have also been lucky since I have had the good fortune to carry out “the unique job I dreamed of” and, at the same time, I also had kids. I have no complaints or discontent for what I may have missed and pathway has been filled with its share of rewards.

Words of Wisdom

I will share my thoughts about a research-focused career path versus an administrative one. Although I had learned a lot from Dr. Babini, the former Director of ISTECC, by closely following his direction for 23 years, when I took over the role of ISTECC (in 2010) I only then fully realized how heavy and burdensome the load was. As Director, I am responsible to ensure the ongoing professional development of staff, to provide the institute with the technological skills it needs. Moreover, it is very demanding to develop strategies to keep pace with the times in the various sectors and lead the frontier of research at the international level. Among the ethical responsibilities, the most engaging and compelling is to ensure maximum standard of safety and protection of personnel and capital goods. Having a career as



A recent image of Alida Bellosi at her desk at ISTECC-CNR.

a researcher is not sufficient preparation to be a good Director of an institute such as ISTECC (where there are ~100 people). After about 4 years in this role as a Director, I feel comfortable and positive. I'd make this choice again, even though my research has taken a back seat. Conducting research satisfies an innate curiosity to study, investigate, compare, discuss, plan, correlate data and theories, propose solutions, formulate models, explain what no one before has attempted to do, compare at the international level, propose innovative ways, etc. However, in the role of Director, it's impossible to maintain an active role in the research: there is no time to collect extensive data, to read or write articles, and to design and follow experimental activities. The daily duties focus on circulars, regulations, reports, financial statements, and contracts. It is rather impossible to have an active presence in the international scientific community; that requires the maximum level of knowledge, being up-to-date, and having an ongoing consistent presence at conferences and meetings. However, the satisfaction comes in a different way. I am glad to have created the conditions for future development of the Institute, to have laid the foundation for the growth of staff and young students, and to have encouraged so many young people in research. It is excellent to see their enthusiasm and interest. In closing, let me say that a researcher has "the best job in the world," while the director has "a continuous and interesting uphill challenge." Some of the perks/benefits provided to directors make it feel "not so bad."

I want to advise young people looking at a career in research: study a lot, commit, never give up, try to rise above the others, make a name for yourself, travel and open

your mind to the experience, listen a lot to senior scientists (at least at the beginning), treasure the advice of someone who has experience, sacrifice something of your private life for professional growth, and believe in what you do. In the lucky case, your road will be TO DO RESEARCH: convince yourself that you had a great fortune and you are a great soul, you have undertaken one of the most exciting existing jobs, though . . . you'll never (probably) be rich in money, but (certainly) very loaded with personality and intellect.