

Foreword

The first six papers of this issue are dedicated to the memory of Professor Giuseppe Bianchi (1919–1996) in recognition of his contributions in the field of applied and industrial electrochemistry. The contributors are his early collaborators at the Department of Physical Chemistry and Electrochemistry of the University of Milan, as well as persons with whom he worked in close contact for extended periods of time. The homage of the whole Italian scientific community is represented by a contribution from the group of Bruno Scrosati, incumbent President of the Italian Chemical Society.

Giuseppe Bianchi was born in Bergamo in 1919 and studied at the Polytechnic of Milan where he received the “Lauree” in Industrial Chemistry and in Electrical Engineering, which constituted an ideal background to his interest in the problems of industrial electrochemistry. At the Polytechnic he started his scientific career under the guidance of two renowned electrochemists: first Oscar Scarpa, and later Roberto Piotelli. In that period Professor Bianchi visited Professor Chaudron in Vitry and Professor Feitknet in Bern to learn new techniques for the study of materials, particularly electron diffraction and electron microscopy.

In 1954 he won the chair of Physical Chemistry, thus moving to Camerino and then to Modena at the end of 1956. In 1959 he was invited by Professor Livio Cambi, founder of the Course in Industrial Chemistry at the University of Milan, to the Chair of Electrochemistry in the same University, where he established the Institute of Electrochemistry and Metallurgy, which later became the present Department of Physical Chemistry and Electrochemistry.

In Milan Professor Bianchi developed his research interests in many directions such as electrochemical thermodynamics and kinetics, corrosion and protection of metals, industrial electrochemistry, electrochemical interfaces, solid state electrochemistry and organic electrochemistry. The Institute grew in size and quality of research to become, within a few years, one of the major electrochemical centres in Europe. The Presidency of the International Society of Electrochemistry (ISE) in 1969 was a fitting recognition of Giuseppe Bianchi's internationally recognised achievements.

Due to his engineering background, Giuseppe Bianchi's work was always directed to practical problems. His scientific activity thus included both fundamental research and industrial consultancy. The former is testified by over 150 publications, the latter by several patents, including, in particular, the development of materials for DSA together with the De Nora Company. Also worthy to mention are his studies of cathodic oxygen reduction related to both corrosion phenomena and fuel cells, of localized and



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stress corrosion, and of the electronic and protective properties of passive films. More recently, he contributed to the study of corrosion in seawater, to the cathodic protection of metals with the use of insoluble anodes, and was involved in the “Volta Project” devoted to the technological development of fuel cells in Italy. He dedicated his last years to the study of ‘reliability’ related to corrosion phenomena in chemical plants and to the development and application of expert systems for diagnoses in the field of corrosion.

Giuseppe Bianchi was, for many years, a member of the Scientific Board of the European Federation of Corrosion, from which he received a Gold Medal in 1965. A Gold Medal was also presented to him by the Italian Association of Metallurgy in 1989. Besides being President of ISE in 1969, he was elected Fellow of the Institution of Corrosion, Science and Technology. In 1979 the Minister for the University conferred on him a 1st Class Diploma for his contributions to science and scholarship.

Giuseppe Bianchi died on 21 August 1996 in his native town of Bergamo. Due to a progressive decay in his health, he retired early from teaching. After his retirement, he was appointed Emeritus Professor of the University of Milan. His colleagues remember him as a very active man with a strong spirit. All of us in his Department owe to him the creation of excellent conditions for our own lines of research as well as invaluable advice for both science and life.

Sergio Trasatti
Milan, November 1997