

Franco PIACENTI

Professor Piacenti was born in Florence on July 1st, 1927 where he studied and obtained his degree in chemistry, in 1951 with prof. Sacconi (1911-1992) as supervisor.

Since 1951 he worked at the Milan Polytechnic with prof. Giulio Natta (1903-1979), in the period devoted to the research on the polymerization of propene: Natta was awarded in 1963 with the Nobel prize in Chemistry for these studies.

In 1955 Piacenti moved to the University of Pisa, as assistant professor and co-operated with another important researcher of Italian Industrial Chemistry, prof. Piero Pino (1921-1989).

Piacenti contributed to the reconstruction of the old chemical laboratories of the Chemical Institute at University of Pisa.

In the period 1964-1968 he was member of the Chemical Science Consultancy Committee of the National Research Council.

In 1968 he moved to the University of Florence as full professor of Industrial Organic Chemistry, where he performed his activity up to his departure in 2002.

He was vice-president of the Italian Chemical Society (SCI, 1984-1986) and president of the Division of Industrial Chemistry of the SCI for 6 years (1980-1985).

The scientific activity of Piacenti was devoted to the studies on the activation of small molecules such as carbon monoxide and hydrogen. A special attention was devoted to the hydroformylation of olefins, to the carbonylation of saturated or unsaturated organic substrates and to the hydrogenation of organic substrates. He studied the hydrogenation of olefins both from the industrial and mechanistic point of view in cooperation with Montedison S.p.A. Results and scientific applications are reported in important international and domestic journals, together with the deposit of several



patents. He was awarded with the gold medal Piero Pino from the Industrial Chemical Division of the Italian Chemical Society in June 2002 with the following motivation: *as an acknowledgement of the large and meaningful contribution given to the innovation in the Industrial Chemical processes with a connection between the scientific aspects of its researches and the relevance of their technological application.* This award was the due acknowledgement to Piacenti for the constitution and coordination of the association of Professors of Industrial Chemistry.

The flood of Florence in 1966 caused a large change in its scientific carrier. All Florence citizens, and specially those involved in Chemistry, were interested to the recovery of the damaged artworks. He was convinced that Chemistry might give an important contribution and accordingly suggested some remedies to the flood damage. He coordinated together with prof. Giovanni Speroni (1910-1984) and prof. Enzo Ferroni (1921-2007) a research group in this field trying to establish the scientific bases for the Conservation of Cultural Heritage. As a member of the Chemical Consultancy Committee of CNR he suggested interventions to promote studies in this field. In a first step he obtained the financial support for the institution of three Research Centers for the Study of the Deterioration Causes and Conservation Methods of Cultural Heritage, which were located in Florence, Milan and Rome. These Centers resulted from the co-operation between the National Research Council (CNR) and local Universities. He was the director of the Center located in Florence from its beginning in 1997 up to 2002, when the three Centers were merged in the single Institute for the Conservation and Valorization of Cultural Heritage (ICVBC). Thanks to the significant activity of Piacenti in this field the Institute was located in Florence with two branches in Milan and Rome.

He was the first chairman of the Working Party created by the Federation of the European Chemical Society. He was member of the Scientific Committee of the “Progetto Finalizzato Beni Culturali” of the CNR and of the Workshop U.S.A. – Italy for “Conservation of the Cultural Heritage”. He was also the manager of the International Research Project between the University of Florence, the North Carolina State University and the Du Pont de Nemours (USA) on the use of solvents in supercritical conditions.

The activity of the Center for the Study of the Deterioration Cause and Conservation Methods of Cultural Heritage, wisely ruled by Piacenti, let to give evidence of many

parameters for the evaluation of the conservation state of cultural heritage. It was possible to offer a correct scientific interpretation of the deterioration causes and conservation state.

The sparkling intuition of Piacenti and his cooperation with doctor Pasetti (Montefluos SpA) pointed out to perfluoropolyethers as suitable products for the protection of stone materials. For these researches Piacenti obtained the collaboration of large industrial companies such as Montefluos SpA, DuPont de Nemours-USA and Elf-Atochem-USA. These researches had the merit to sensitize the scientific world on the necessity to model and synthesize *ad hoc* compounds and materials able to satisfy the requirements for their use in the sector of Conservation of Cultural Heritage.

To Piacenti, in particular, the merit must be given for the use of perfluorinated polymeric organic materials in the protection of historic and artistic monuments such as the *Duomo* in Prato, the *Duomo* in Lucca and *La Loggia dei Lanzi* in Florence.

Prof. Piacenti gave his coworkers a scientific, rigorous, critical objectivity and love for the research with a special attention to the preservation of cultural heritage.

Prof. Piacenti worked for the institution of the PhD course in Science for the Conservation of Cultural Heritage, and was the first coordinator of the College of teachers and gave, together with prof. Curzio Cipriani (1927-2007), a substantial contribution to the institution of the Diplome, presently degree, in Technology for Conservation of Cultural Heritage of the University of Florence.

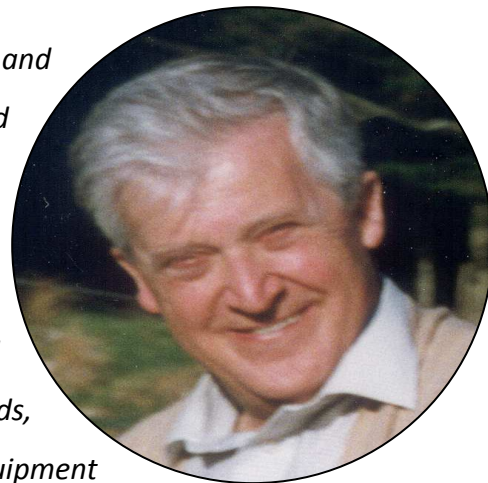
He was a scientist of world-wide renown as testified by the collaboration with several domestic and international institutions and companies, among which *Opificio delle Pietre Dure* in Florence, many *Italian Superintendences*, the *Paul Getty Museum (USA)*, the *North Carolina State University (USA)*, *ELF-Atochem (USA)*, *DuPont de Nemours (USA)*, *Montedison SpA*, *Montefluos Spa*, *Geal srl* and many others.

Due to his intuition and stimulus several non destructive techniques were pointed out in the sector of Cultural Heritage, among which "NMR-imaging", to evaluate the efficiency of hydrorepellent treatments and the porosity of stone materials.

As a conclusion I think that the words written by professor Hal Hopfenberg of the North Carolina State University (USA), and referred to prof. Piacenti, are the best comment to his personality:

“I have begun organizing the talk celebrating the extraordinarily successful international cooperation that Franco was able to coordinate in the last decade of his life. The work that was performed between 1993 and 2002 is nothing short of remarkable since the work embraces not only organic chemistry but also major contributions in physical chemistry, chemical engineering, fluid dynamics, and mechanical engineering. I have accumulated slides documenting Franco's work as well as the slides documenting the Dupont work and the work of prof. De Simone and prof. Carbonell and their students.

All of the Dupont work and the work of De Simone and Carbonell was organized and directed by Franco and comprises contributions in organic chemistry to be sure. But over and above organic chemistry the work also includes impressive contributions in the physical chemistry of supercritical fluids, the chemical and mechanical engineering aspects of rapid expansion of supercritical fluids, complex fluid mechanics, as well as nozzle and equipment design.....



..... in recognition of the broad and impressive scope of the cooperation, involving industry, government, and universities and the various disciplines that Franco brought together in his most successful consortium in two countries, I would respectfully submit that the title might be a bit broader than focusing exclusively on organic chemistry.

Franco Piacenti was seventy five years old when he died in Florence on August 2nd, 2002.

Piero Frediani