

Curriculum Vitae of Alessandro Gandini

Born in Tregnago (Italy) on 9/10/1940.

1962-65: Ph.D. in Polymer Science, Keele University, UK. *Studies on cationic polymerisation.*

1965-67: Postdoctoral fellow at NRCC, Ottawa, Canada. *Primary processes in photophysics and photochemistry.*

1967-68: Research officer at Brookhaven Laboratory, Upton, USA. *Gas-phase kinetics: H/D isotope effects in photochemically generated free radicals.*

1968-76: Professor of Physical Chemistry at the University of Havana, Cuba and head of the Polymer Laboratory at the Cuban National Research Council. *Courses in Polymer Chemistry, Polymer Physics and Photochemistry. Research on the kinetics and mechanisms of the polymerisation of various furan monomers and of the cationic and pseudocationic polymerisation of styrene and vinyl carbazole.*

1976-78: Research officer at NRCC, Ottawa, Canada. *Multiphoton infrared photochemistry: H/D isotope effects in the decomposition of various gaseous substrates.*

1978-2003: Professor of Chemistry at the National Polytechnic Institute of Grenoble, France (promoted to the "classe exceptionnelle" in 1998). *Courses in Physical Chemistry, Photochemistry, Polymer Chemistry and Physics, Materials Science at the Engineering Schools of Papermaking and Printing, Electrochemistry, Physics and Mechanics.* Head of the Polymer Materials Laboratory. *Research on the synthesis, characterization and properties of new polymers and composites, mostly derived from the biomass: cellulose, lignin, furans, chitosan, vegetable oils, suberin and starch.*

2004-2005: *Invited Professor* at the São Carlos Chemistry Institute, University of São Paulo, Brazil. *Postgraduate courses on Polymer Materials and on Surfaces and Interfaces. Research on the chemical modification of cellulose fibres and starch.*

2005-2011: Emeritus Professor, Chemistry Department, University of Aveiro, Portugal. *Postgraduate courses in Polymer Science, Polymers from Renewable Resources, Photochemistry and Photophysics and the Physical Chemistry of Surfaces and interfaces. Coordinator of an industrial-academic research platform on novel polymeric materials from renewable resources, namely cellulose fibres, starch, lignins, chitosan, suberin, furans and vegetable oils.*

2011-2013: *Invited Professor* at the São Carlos Institute of Chemistry, University of São Paulo, Brazil. *Postgraduate courses on Polymers from Renewable Resources. Research on new polymers based on furans, vegetable oils, starch and cellulose.*

Visiting Professor at the Universities of Essex, UK (1975), Sao Carlos, Brazil (yearly from 1993-2003), Aveiro, Portugal (1994), Pavia, Italy (1995, 1999), Sfax, Tunisia (yearly 1988-2002) and Girona, Spain (1997, 1999).

Visiting scientist at NRCC, Ottawa, Canada (1973). Invited to give courses on "Polymers from renewable resources" in numerous Universities, including Saltillo (Mexico), Guangzu (China), Sorocaba (Brazil), Motevideo (Uruguay), Mar del Plata (Argentina), Petrobras (Rio, Brazil), Sassari (Italy), San Juan (Costa Rica) and San Sebastian (Spain).

From 1982: *Consultant for several Companies*, in Europe and North America, for the French Ministries of Education, Industry, Energy and Agriculture and the Ministries of Higher Education and Research of Italy, Spain, Canada and Portugal.

Fellow of the *International Academy of Wood Science* (elected in 1994) and member for France (since 1990) of the *UNESCO Committee on the Chemical Exploitation of Biomass*. Fellow of several scientific societies, including the *Royal Society of Chemistry* and the *ACS*.

Honorary Doctor of the Saint Petersburg Forestry Academy (1995)

Honorary Doctor of Havana University (2000)

Invested with the Ermine Decoration of Grenoble National Polytechnic Institute (1995)

Senior Fellow 2014, Istituto di studi Avanzati (ISA) University of Bologna, supervisor Annamaria Celli (DICAM, University of Bologna).

-Research project: "Recent advances in the growing field of polymers from renewable resources": activities developed at the DICAM in October-November 2014 in collaboration with the research group of Polymer Science (Annamaria Celli).

-Preparation and publication of two chapters of the Book: "Chemicals and Fuels from Biobased Buildings Blocks," Eds. Cavani F., Albonetti S., Basile F., Gandini A., Wiley:

Celli A., Gandini A., Gioia C., Lacerda T.M., Vannini M., Colonna M. (2016) *Polymers from pristine and modified natural monomers*, vol 1, chap. 12, pag 275-314.

Celli A., Gandini A., Gioia C., Lacerda T.M., Vannini M., Colonna M. (2016) *Polymers from monomers derived from biomass*, vol 1, chap. 13, pag 315-344.

-Publications of the papers:

1) Banella M. B., Gioia C., Vannini M., Colonna M., Celli A., Gandini A. (2016) *A Sustainable Route to a Terephthalic Acid Precursor*, ChemSusChem, 9, 1-5.

2) Banella M.B., Giacobazzi G., Vannini M., Marchese P., Colonna M., Celli A., Gandini A., Gioia C. (2019) *A Novel Approach for the Synthesis of Thermo-Responsive Co-Polyesters Incorporating Reversible Diels-Alder Adducts*, Macromolecular Chemistry and Physics, 220 (15), art. no. 1900247.

The collaboration with the Polymer Science group of DICAM, mainly with Annamaria Celli, in the field of the synthesis of new bio-polymers from renewable resources, has been continuous since 2014 through the supervision of doctoral theses and the join collaboration with prof. Talita Lacerda from University of São Paulo, Brazil.

Present position: Research Advisor at Pagora School, Grenoble Polytechnic, France and at University of São Paulo at São Carlos and Lorena, Brazil.

>100 PhD Theses supervised; >460 total publications, including 3 books, >60 monographs (cited >20,000 times); >470 communications at scientific symposia, including >100 invited or plenary lectures. >140 invited seminars in Universities and Research Centres in >30 countries.

Co-inventor in >20 patents, in collaboration with Universities and companies.