

# Mario Polesello

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**Mario Polesello** is an inorganic chemist with over 30 years of experience in the polyolefin industry. He has been an important contributor in all faces of the business from basic research and synthesis, to plant production.

## Professional skills

- polymers, Ziegler-Natta catalysts, PP, LLDPE, HDPE, EPR elastomers, polyenes
- supported catalyst preparation and scale-up, Ziegler-Natta, and other single site catalysts
- activators, Bronsted and Lewis acid types for single-site catalysts

He provides a liaison between customers and other technical professionals to facilitate technology transfer. This also extends into communication between chemists and engineers to make the scale-up of processes more rapid.

## Experience

**SR. CATALYST CHEMIST, CATALYST SYSTEMS. DVT. | VERSALIS, FERRARA RESEARCH CENTER | JUL. 2015 TO PRESENT**

- Catalyst production & product devt. for LLDPE plant in Dunkerque, France.
- Devt. of original catalyst and process for APAO rubbers.

**CATALYST MANUFACTURING MNGR. | POLIMERI EUROPA/VERSALIS, FERRARA CATALYST PLANTS | JAN. 2003 TO JUN. 2015**

- Catalyst production for Priolo LLDPE plant (11 ton in 2011 max.) and Porto Torres HDPE (6 ton in 2004 max.).
- Responsible for technical support at both polyethylene plant.  
Technical support for original catalyst license to: Akzo Nobel, BASF, Albemarle, Grace.

**PILOT PLANT DPT. MNGR. | ENICHEM ELASTOMERI, FERRARA RESEARCH CENTER | FEB. 1996 TO DEC. 2002**

- Process studies on catalyst systems for EP(d)M slurry process, commercial product optimization.

- Technolgicas studies for a water-free finshing section on commercial process.
- Technical support for process and application, PB production.

#### **CHEMICAL ADVISOR | ENICHEM, FERRARA CATALYST PLANT | LUG. 1989 TO JAN. 1996**

Responsible for technical support at Brindisi HDPE polyethylene plant.  
Preparation and testing of supported Ziegler-Natta catalysts  
Scale-up of catalysts from lab to Pilot Plant.

Technical responsible for catalyst production ad assistance for license agreement from Mitsubishi Kasei (JPN).

#### **JR. CATALYST CHEMIST | ENICHEM, BOLGIANO LABORATORIES | JUN. 1986 TO JUN. 1989**

Technical support for catalyst manufacturing activity at Paderno Dugnano (MI)

Preparation and testing of supported Ziegler-Natta catalysts  
Supervised lab technicians.  
Scale-up of catalysts from lab to Pilot Plant

#### **POSTDOCTORAL FELLOW | UNIVERSITY OF UDINE, ITALY | DEC. 1985 TO MAY 1986**

Thermodynamic studies on stability of oxo-vanadium(V) complexes in non-acqueous solvents.  
Editing of scientific communications for Italian Chemical Society (SCI) meetings.

#### **SGT. (RETIRED) | ITALIAN ARMY | ALPINE BRIGADE "JULIA" | DEC. 1984 TO NOV. 1985**

Logistic Command, veterinary service.

#### **POSTDOCTORAL FELLOW | UNIVERSITY OF PADUA, ITALY | MAR. 1984 TO DEC. 1984**

Thermodynamic studies on stability of uranium(VI) and lanthanides complexes in non-acqueous solvents.  
Editing of scientific communications for Italian Chemical Society (SCI) meetings.

## **Awards and Recognitions**

2008: Eni "Knowledge Owner", Proprietary polyolefins catalyst preparation.

2010: Eni Award for innovation: "New Ziegler-Natta catalysts, vanadium free, for low environment impact ethylene- alpha.olefins production.

## **Instruction**

- Degree in Chemistry, University of Padua, Italy, 1984
- Postdoctoral School of Nuclear Chemistry, University of Padua, Italy, 1986

## **Language**

- English: 3-B1 Intermedialte

## Patent list

**F. Masi, A. Moalli, R. Invernizzi; F. Menconi, C. Ferrero, S. Malquori, L. Barazzoni, M.Polesello**

**“Catalyst component and catalyst for the production of very high molecular weight polyolefins”**

*Patent number:* IT1227054 — 09-09-1988

*Also published as:* EP0358264, US5070051, JP2759351, CA1334405

**L. Luciani, R. Invernizzi, F. Masi, M. Pondrelli, M. Polesello**

**“Supported catalyst for the polymerization of ethylene and for the copolymerization of ethylene with alpha-olefins, its preparation and its use”**

*Patent number:* IT1240611—16-03-1990

*Also published as:* US5278117, EP0446989, JP3223301, CA2038330, BR9101045

**F. Masi, R. Santi, A. Sommazzi, A. Proto, M. Polesello, A. Vallieri**

**“Supported catalyst containing active titanium in the homo-, co-, and ter-polymerization of olefin-unsaturated compounds”**

*Patent number:* ITMI20012710 — 20-12-2001

*Also published as:* WO03054034, US7449528, EP1456254, CA2470179, AU2002361996

**F. Masi, M. Polesello, R. Fusco, A. Sommazzi, A. Proto, L. Meda, T. Pennati, G. Conti, F. Menconi**

**“Catalysts of the Ziegler-Natta type for the (co)polymerization of olefins with a high productivity”**

*Patent number:* IT1397080 — 23-11-2009

*Also published as:* WO2011060958, EP2504366, US2012322959, JP2013511607, KR20120091366, CA2781196, AR046376, CN102725317

**F. Masi, F. Menconi, G. Conti, M. Polesello, A. Zanellato**

**“Catalyst precursor and catalyst for the high-temperature (co)polymerization of alpha-olefin”**

*Patent number:* IT1403278 — 20-12-2010

Also published as: WO2012084920, EP2655437, US2013317184, JP2013545864, ITMI20102332, CN103347906, CA2821961

**G. Pampaloni, F. Renili, A. Sommazzi, F. Masi, F. Marchetti, M. Polesello**

**“Metal alkyl-arenes and processes for the preparation thereof “**

*Patent number:* IT1403289 — 27-12-2010

Also published as: WO2012089652, EP2658860, US2013296592, MX2013007520, JP2014500300, ITMI20102400, CN103313994, CA2822110, EA201300755

**F. Masi, A. Sommazzi, M. Polesello**

**“Catalizzatore solido per la (co)polimerizzazione delle  $\alpha$ -olefine e procedimento per la sua preparazione”**

*Patent Number:* IT2014MI01392 — 31-07-2014

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