

CURRICULUM VITAE

Name: PAULO ALTOÉ

Birth date: July 18, 1954

Place: Descalvado - São Paulo- Brazil

Nacionality: Brazilian

High School: Instituto de Educação José Ferreira da Silva
Descalvado - São Paulo – 1971

University: Graduation-Chemistry Degree – Oswaldo Cruz College
São Paulo - 1976

Post-graduation: M.Sc. Degree – IME – “Military Institute of Engineering”
Rio de Janeiro - Brazil 1980

Professional Background

Date: November 2016 present

United Nations Environmental Program – Nominated as Co-Chair at Technology and Economic Assessment Panel (TEAP) for Foams Technical Options Committee (FTOC) for Montreal Protocol

Date: January 2016 present

United Nations Environmental Program (UNEP) - Nominaiton as member (A-5) of Foams Technical Options Committee (FTOC) for Montreal Protocol

Date: June 2015- 2018

Dow Química SA – Brazil

Fellow Scientist in the Latin American Polyurethane Group

Date: January 2001-June 2015

Company: Dow Quimica SA - Brazil

Job Title: Senior Specialist

Responsibility: Development of new products, implementation of new technologies and technical support of polyurethanes for the appliance and construction markets.

Member of the Commercial and Technical Team for key accounts in Brazil with the responsibility to give support and operate with the commercial peer to implement the marketing strategy in these accounts.

Technology Leader for Latin America in the Polyurethane Rigid Foams

Global Team Leader in the “People Culture and Values” programme for productivity improvement in the Dow’s PU community (2000-2001)

Date: July 1997-December-2000

Company: Dow Europe S.A - Switzerland

Job Title: Senior Specialist

Responsibility: Technical support and development of new products and implementation of new technologies in the area of rigid polyurethane foams for the Appliance Market in Europe with responsibility in the following countries: Bellarussia, Hungary France, Poland, Portugal, Romenia, Slovenia, Seeden, and Turkey.

Member in the R&D for Growth Global Team with the responsibility to improve and develop products for Hydrocarbon technology with emphasis to the European and Latin American Market and support to Asia, Pacific and USA Areas.(1999-2000)

Date: June 1992-June 1997

Company: Dow Química – Brazil

Job Title: Product Technology Manager

Responsibility: Technical support and development of new products and implementation of new technologies in the area of rigid foams for the thermal insulating market of appliances and civil construction. Including in 1993-1994 responsibility for elastomers and semi-rigid foams in Automotive Area for filters and bumpers.

Date: May 1991-May 1992

Company: Dow Química - Brazil

Job Title: Senior Project Supervisor

Responsibility: Development and technical support for Methylene diisocyanates (MDI), Polyols and Polyurethane Systems for elastomers, coatings and adhesives. Development of semi-rigid and some flexible foams special markets.

Date: Jan 1990 – May 1991

Company: Dow Química - Brazil

Job Title: Senior Project Supervisor

Responsibility: Development and technical support for epoxy resins in the market of coatings for can and coil, marine and industrial maintenance and (C.E.D) cathodic electrodeposition for automotive.

Date: Jun 1988 – Jan 1991

Company: Dow Química - Brazil

Job Title: Project Supervisor

Responsibility: Development and technical support for epoxy hardeners and epoxy resins for structural adhesives, floorings, crack injection, encapsulation, casting etc, in the market of: civil construction, electrical and automotive. Responsible to report the developments and progress in the Latin America Area to the global coordinator.

Date: Oct 1987 - Jun 1988

Company: Resana - Reichold Chemical Co - Brazil

Job Title: R&D – Manager (Management of 35 people)

Responsibility: Transferring technology from USA to Brazil, managing budget, facilities and human resources in laboratories of synthesis, analytical, technical applications, pilot plant and knowledge management in the technologies of formaldehyde resins (phenolics, furanics, urea, melamine) alkids, polyurethane, insaturated polyester, acrylic latex and others.

Date: Oct 1980 - Jun 1987

Company: Resana - Reichold Chemical Co - Brazil

Job Title: Laboratory Supervisor

Responsibility: Responsible for synthesis and application of formaldehyde resins (phenolics, furanics, urea, melamine) alkids, polyurethane, insaturated polyester, acrylic latex and others for

the following markets: sand paper, foundry, friction material (brakes), grinding wheels, coatings and varnishes, textile etc...

Member of Associations Technical Teams

-**ABIQUIM**: Brazilian Association of Chemical Industry

-**ABPOL** – Brazilian Association of Polymer – [Inactive]

-**GT- HCFCs – PBH** – Member of Technical Team in the Brazilian Program of HCFCs Elimination

-**GPUA-WG** – Member of Global PU Association Working Group – [ABIQUIM, American Chemistry Council-USA, ISOPA-EU and PU Association of: China, Brazil, India, Japan, Korea, , Thailand...] 2014-2017

Publications – External and in-company

-Adami C; Abe R; Altoe Paulo – Patent Applied -2018 - Sandwiche Panel with Silicone and Polyurethane Foam for Stove Insulation - 2018

-Altoé P; Riccio R; Rose M; -Whirlpool - Dow Assessment of Formacel®1100 Blowing Agent in Rigid Polyurethane Insulating Foams for Domestic Appliance – Corregio – Italy – 2015 – CRI

-Altoé P; Riccio R; Micheletti; Assessment of Solstice® LBA Blowing Agent in Rigid Polyurethane Insulating Foams for Domestic Appliance: industrial validation – Corregio – Italy – 2014-CRI

-Altoé P; Abe Rodnei - Hydrofluoroolefins (HFOs) – A feasible alternative to replace HCFC141b in PU rigid foams - FEIPUR – São Paulo – BR – 2014

-Thomaz G; Guizoni J; Altoé P; Loh G; Torio A - Formacel®1100 (FEA-1100), a Zero ODP and Low GWP Foam Expansion Agent for the Appliance Industry – CPI Proceedings – Phoenix-Arizona – USA - 2013

-Altoé P. - Opportunities and Challenges to Replace HCFC141b in Rigid Foams -FEIPUR – São Paulo – BR- 2012

-Rose, M; Parenti V; Altoé P; Assessment of Formacel ® 1100 (FEA-1100) Blowing Agent in Rigid Polyurethane Insulating Foams for Domestic Appliance – CPI – Proceedings – Atlanta –Georgia – USA - 2012

-Altoé P; Fernandes A; - New Generation of Foams for Thermal Insulation with Environmentally Friendly Blowing - FEIPUR – São Paulo – BR - 2010

-Mota, B; Altoé, P Voids analysis method in rigid foams through a free software image analyzer [Image J] – São Paulo –2007 -CRI

-Altoe, P; Abe; Rodnei – Challenges and Opportunities for Water Blown Rigid Foam in Brazil – Utech Latinamerican Congress of Polyurethane – São Paulo – 2001

-Altoé, A.P,Clavel – New Advances in Hydrocarbon Foams for Appliances Resulted in Improved Performance – Appliance Magazine,2001.

-Altoé, P – Method to Determine and Reduce Surface voids in Hydrocarbon Rigid Foams– Dow Europe – Int. Dev. Center, Meyrin Switzerland, 2000 - CRI

-Altoé, P,Clavel, P.; Applying the Power of the AND in Rigid Foams for Appliances, API Proceedings, Chigado 2000

-Altoé, P,Clavel, P.; Dean G.; Parenti V. - Development and Technology in Rigid Foam for Appliances Show a Clear Tendency to Hydrocarbon Blends – SPI Proceedings , International Congress , Dallas 1998

-Altoé, A.P; Alziati, C; França, M.P; Morgado, S.- Epoxy system environmental friendly for can & coil coating, Anais of 2nd International Congress of Coating, vol II, 588, 1991

-Altoé, A.P - Production Technolgy for Liquid Reactive Polyamide Epoxy Hardner Type, Dow Chemical USA 1989 - CRI

-Altoé, A.P. and Whei-Oh-Lin - Neutral Diamides Ionophores, Quimica Nova, São Paulo 7 (1):4-6

- Whei-Oh-Lin, Souza, M.C.B.V; Altoé, A.P.; Alt, H.G. - New Multidentate compounds of ether-ester type, Monatshefte für Chemie, 114, 359
- Whei-Oh-Lin and Altoé, A.P. - Neutral Diamides Ionophores Phenilediacetamides, Monatshefte für Chemie, 113, 101
- Whei-Oh-Lin and Altoé, A.P. - Phenylendioxydiacetamide end Group effect -Monatshefte für Chemie, 112, 10
- Altoé, A.P. and Whei-Oh-Lin - Efeito dos Substituintes Ionóforos do Tipo Poliamidas. Summary of Works of SBPC, 1980 (Communication)
- Altoé, A.P. - Síntese e Propriedades de Ionóforos Neutros , Diamidas e Diésteres - Master Thesis, IME - Military Institute of Engineering - Rio de Janeiro, 1979
- Whei-Oh-Lin and Altoé, A.P. - The Preparation of Diamides Ionophores. Resúmenes de los Trabajos, XIII Latin American Congress of Chemistry, Lima Peru, 1978 (Communication)
- Altoé, A.P. and Whei-Oh-Lin - Uma Conveniente Síntese para o Ácido 1,2-fenilenodioxidiacético - Summary of Works of SBPC, 1978 (Communication)

Courses - Congresses - Seminars Participation

- UNDP & Malaysian Government-Workshop "Foam Alternatives and Hand Holding to Systems House and PU Companies – HPMP II" February 2020 at Shah Alam, Selangor – Panel Participation – Presentations and Systems House Visits for trainings
- UNDP & Indian Government – Workshop –“Conversion to non-ODS and Low GWP blowing agents in foam manufacturing sector” February 2020 -Gulmohar Hall, Convention Centre India Habitat Centre, Lodhi Road, New Delhi - Panel Participation – Presentations and individual discussions with Systems Houses and PU Companies
- UNDP & Indian Government - "Alternative Technologies to HCFC-141b in Foam Manufacturing Sector" February, 2019 at New Delhi – Panel Participation – Presentations and Systems House Visits for trainings
- UNDP & Indonesian Government – Green Supply Chain Workshop – Cooling without Warming- Jakarta – October, 2018. Panel Participation and Presentation: Low-GWP blowing agents as alternatives of HCFC-141b in the PU Foam Industry
- UTO Colombia – I International Congress for ODS Management – Bogota 2017 – Panel UTO-TEAP Participation and Presentation: Low GWP Blowing Agents for Polyurethane Foam Formulations
- UNEP /OzL.Pro/Workshop.8-/1 –Workshop on hydrofluorocarbon management- “Challenges and opportunities in addressing high-GWP HFCs in the foam issues—*Overview Speaker* - Bangkok – April 2015
- International Seminar- Alternative for HCFCs in the foam Sector-UNDP, Ministério do Meio Ambiente-Brazil, and Ministero Dell’ Ambiente-Italy -Chapecó-SC - Brazil - July 2014
- Utech Europe 2015- Exhibition & Conference- Maastricht –NL – 2015
- FEIPUR - Int. Fair of Polyurethane - Exhibition & Conference-*Speaker* – São Paulo Brazil -2014
- PU China 2014 – Exhibition & Conference – Shanghai – China - 2014
- CPI 2013 - Polyurethanes Technical Conference –Phoenix – AZ – USA -2013
- FEIPUR - Int. Fair of Polyurethane - Exhibition & Conference-*Speaker* – São Paulo Brazil - 2012
- FEIPUR - Int. Fair of Polyurethane - Exhibition & Conference-*Speaker* – São Paulo Brazil - 2010
- International Technical Meeting on HCFC phase-out –*Speaker* - Montreal – Canada – 2008
- Financial Mathematics for R&D and TS&D people – Dow Brasil – SP - Jun 2004
- Optimizing Creativity and Innovation – Dow Química SP- 2002
- Six-Sigma Black-Belt graduation – Atlanta – USA - 2002

- UTECH – Latinamerican Congress of Polyurethane – São Paulo - 2001
- Science, Invention and Innovation Congress & Fair – Geneva – Switzerland - 2000
- Computing & Modeling for foams –Sandia National Institute – USA - Dow Meyrin – Suíça - 2000
- Ideation and Creativity – Dow Meyrin - Switzerland - 2000
- Project management – Microsoft Tool – Dow Meyrin – Switzerland - 2000
- Fundamentals on Project management – Microsoft Tool Dow Meyrin – Switzerland - 1999
- International Foam Symposium – Dow Midland – USA 1999
- DC&T – Development Commercialization Technology – Dow Switzerland - 1999
- SPI 1998 - International Congress , Dallas 1998
- DOE – Design of Experiment – Dow Hoergen – Switzerland 1998.
- CFC Replacement Colloquium - CETESB - São Paulo, 1996
- Workshop – Personal Success - Dow São Paulo, 1996
- PU Rigid Foams Training , Dow USA and Dow Europe, 1995
- 3rd International Congress ABPOI, Thermosetting Section , São Paulo, 1993
- Polyurethane Technology -Adhesion -ABPOI , Sto André, 1992
- Fundamentals of Business Administration - Dow São Paulo, 1991
- Polyols and Polyglycols – Technology and Production Process - Dow Guarujá, 1991
- Polyurethane Technology Training - Dow Fco da Rocha, 1991
- Experimental Design - Dow Fco da Rocha, 1991
- Powder Coating Congress - FIESP, São Paulo, 1991
- 2o Internacional Congress of Coatings - São Paulo, 1991
- Epoxy Resins – General applications for coatings - Dow Fco da Rocha, 1990
- Brazilian Colloquium of Rusting in Electrical Area - UFRJ - Rio de Janeiro, 1990
- 1o Internacional Congress of Coatings - São Paulo, 1989
- MIR-Management of Interpersonal Relationship - Dow São Paulo, 1989
- ACEBS-Ambient cure epoxy binder system – Rheinmünster -Germany, 1989
- 3o Brazilian Meeting of Organic Chemistry - São Carlos, 1989
- Fundamentals of Epoxy Technology - Dow Fco da Rocha, 1988
- 1o Internatinal Thermal Analysis Meeting - IMA-Inst. de Macromoleculas- Rio, 1986
- Gas Chromatography - C.G - Cientific Instruments - São Paulo , 1982
- Gel Permeation Chromatography - Perkin Elmer - São Paulo, 1982
- Thermal Analysis – TGA, DSC, DMA - Perkin Elmer - São Paulo, 1982
- Sociedade Bras. p/Progresso da Ciência (SBPC) Annual Meeting - São Paulo, 1980
- Sociedade Bras. p/Progresso da Ciência (SBPC) Annual Meeting - São Paulo, 1978

Knowledge of Languages

Portuguese: first language

English: fluent

Spanish: fluent

French: Advanced

Italian: some knowledge

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