



## Professional vitae

### Name, born

- András TÓTH, Hungary, 1950.

### Education

- 1965 – 1969: Budapest, Chemical Technical School Lajos Petrik: Chemical technician.
- 1969 – 1975: Moscow, M.V. Lomonosov Institute of Fine Chemical Technology: Chemical engineer.
- 1980 – 1982: Pisa, Scuola Normale Superiore and University of Pisa: "Perfezionamento" studies.

### Workplace, experience

- 1975 – 1980: Research Laboratory for Inorganic Chemistry of the Hungarian Academy of Sciences.  
Gas-solid reactions.
- 1980 – 1982: Scuola Normale Superiore, Pisa and University of Pisa.  
Synthesis and characterization of copper(I) complexes.
- 1982 – 1997: Research Laboratory for Inorganic Chemistry of the Hungarian Academy of Sciences.
- 1998 – 2014: Institute of Materials and Environmental Chemistry, Chemical Research Center,  
Hungarian Academy of Sciences.

### Degrees

- 1975: Moscow, M.V. Lomonosov Institute of Fine Chemical Technology.  
The Soviet Academy of Sciences Institute for Elemento-organic Compounds.  
Thesis: Synthesis and Characterization of Organopolychlorosiloxanes.  
MSc in Chemical Engineer.
- 1980: Budapest, Eötvös Loránd University.  
Thesis: Thermogravimetric Studies on the Chlorination Reactions of Alumina.  
Doctor rerum naturalium.  
Hungarian Doctoral Council.
- 1996: Budapest, Hungarian Academy of Sciences Doctoral Council.  
Thesis: Surface Modification and XPS Characterization of Polymers.  
CSc, equivalent to PhD.  
Hungarian Academy of Sciences.

### Position

- 1975 – 1978: Research assistant
- 1979 – 1995: Research fellow
- 1996 – Senior research fellow
- 2007 – 2014: Head of laboratory

### Scientific interest (Keywords)

- Surface chemistry. XPS, ESCA. XAES, Auger parameter plot. Plasmon loss energy.
- Polymers. Siloxane, organosilicon, poly(dimethyl-siloxane), poly(vinyl-trimethyl-silane), polyimide, polysulfone, ethylene vinyl acetate, polyethylene-oxide, polypropylene, polyvinyl-chloride, polyethylene, ultra-high molecular weight polyethylene UHMWPE, polyamide, poly(ethylene-terephthalate), poly(tetrafluoroethylene), polycarbonate, polyvinylpyrrolidone.
- Textile, cellulose, cotton, linen, flax, paper, wood, pulps.
- Chitosan.
- Membrane separation. Microfiltration, ultrafiltration, reverse osmosis, dialysis, electro dialysis, pervaporation, gas separation, liquid membrane separation.
- Filler, particles.
- Surface modification ion beam. Stopping and Range of Ions in Matter SRIM/TRIM programs.
- Fast atom beam FAB.
- Plasma chemistry. RF plasma, corona discharge, plasma immersion ion implantation PIII, dielectric barrier discharge DBD, cold atmospheric air-plasma.

- Nanomechanical and nanotribological analysis, nanoindentation, hardness and Young modulus, surface topography, abrasive wear, nanoscratch, friction. Roughness, smoothing, finishing.
- Surface energy, contact angle, wettability, hydrophilicity, hydrophobicity, superhydrophobicity, 'lotus'.
- Optical microscopy, digital camera.
- Colorimetry CIELAB.
- Surface electrical resistance.
- Design of experiments DOE.
- Nanodiamond.

#### **Membership**

- Hungarian Chemical Society.
- Membrane Technique (Hung. Chem. Soc.).
- Committee for Surface Chemistry and Nanostructure of Materials (MTA).
- Scientific Committee for Central European Symposium on Plasma Chemistry.

#### **Awards**

- Researcher Prize. Chemical Research Center of the Hungarian Academy of Sciences, 2007.
- Certificate. ValDeal Innovation Zrt. and The University of Texas at Austin IC<sup>2</sup> Institute, 2007.

#### **Patents**

- 174 343 1976, 211 184 1993, Russian 2072890, P 0700129 2007, International WO 2008/096186 A1, P 0700445 2007, P 0900416 2009

#### **Knowledge of languages**

- English (C), Italian (C), Russian (C).

#### **Books**

- Number of books and chapters: 14

#### **Publications (MTMT2)**

- Number of publications: 148
- Number of independent citations: 2011
- Hirsch-index: 29

#### **Website**

[www.andrastoth.net](http://www.andrastoth.net)