



Professional vitae

Name, born

- András TÓTH, Hungary, 1950.

Education

- 1965 – 1969: Budapest, Chemical Technical School “Lajos Petrik”: Chemical technician.
- 1969 – 1975: Moscow State University of Fine Chemical Technologies: Chemical engineering technologist. Equivalent to a diploma obtained in the organic and biological chemistry department of the Faculty of Chemical Engineering of the Budapest University of Technology.
- 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. Research field: surface chemistry. Material sciences, technologies, surface engineering, multidisciplinary science.

Degrees

- 1975: Moscow State University of Fine Chemical Technologies. The Soviet Academy of Sciences Institute for Elemento-organic Compounds. Thesis: Synthesis and Characterization of Organopolychlorosiloxanes. MSc in Chemical Engineering.
- 1980: Budapest, Eötvös Loránd University. Thesis: Thermogravimetric Studies on the Chlorination Reactions of Alumina. Doctor rerum naturalium, equivalent to PhD. 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, polyether ether ketone, polysulfone, ethylene vinyl acetate, polyethylene oxide (PEO), polypropylene, polyvinyl-chloride, polyethylene, ultrahigh molecular weight polyethylene

UHMWPE, polyamide, poly(ethylene-terephthalate), poly(tetrafluoroethylene), polycarbonate, polyvinylpyrrolidone.

- Silicone-rubber.
- Textile, cellulose, cotton, linen, flax, paper, wood, pulps.
- Chitosan.
- Membrane separation. Microfiltration, ultrafiltration, nanofiltration, reverse osmosis, dialysis, electro dialysis, pervaporation, gas separation, liquid membrane separation.
- Fillers, particles.
- Surface modification ion beams. Low-energy ion implantation. Stopping and Range of Ions in Matter SRIM/TRIM programs.
- Plasma chemistry. RF plasma, corona discharge, plasma immersion ion implantation PIII, dielectric barrier discharge DBD, cold atmospheric air-plasma.
- Fast atom beam FAB.
- Chemical vapor deposition CVD, physical vapor deposition PVD, DC magnetron sputtering.
- Surface energy, contact angle, wettability, hydrophilicity, hydrophobicity, superhydrophobicity, lotus effect.
- Attenuated total reflectance ATR – FT-IR spectroscopy. Raman spectroscopy.
- Optical microscopy, digital camera.
- Colorimetry CIELAB.
- Surface electrical resistance.
- Design of experiments DOE.
- Nanomechanical and nanotribological analysis, nanoindentation, hardness and Young modulus, surface topography, abrasive wear, nanoscratch, friction. Roughness, smoothing, finishing.
- Orthopaedic materials.
- Dental materials.
- Nanodiamond.

Membership

- Hungarian Chemical Society.
- Membrane Technique (MKE).
- 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 IC² 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

- Hungarian - mother tongue.
- English (C), Italian (C), Russian (C).

Publications (MTMT2)

- Books, editors: 3
- Chapters: 27
- Publications: 181
- Independent citations: 2338
- Hirsch-index: 30

Website

www.andrastoht.net