Curriculum Vitae

Antonio Tricoli, PhD
Group Leader, Nanotechnology Research Laboratory
Research School of Engineering, College of Engineering and Computer Science
The Australian National University
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Citizenship: Italian, Swiss; Permanent Residency: Australia
Language Skills: English, Italian, German, French, Spanish

Education

2010 PhD Thesis at the Department of Mechanical and Process Engineering, ETH Zurich, Switzerland. Dissertation: *Gas sensitive nanostructured films by direct flame synthesis and deposition* with Prof. S.E. Pratsinis

2004 Dipl. Ing. ETH (CGPA 5.6/6) at Department of Mechanical and Process Engineering, ETH Zurich, Switzerland. Master Thesis: *Numerical calculation of the blood flow through a cerebral aneurism featuring MR reconstructed real geometry and an elastic artery wall* with Prof. D. Poulikakos and Prof. Y. Ventikos

1999 High school diploma (mark 100/100) at the Institut Montana, Zugerberg, Switzerland

Awards

2016 Westpac Research Fellowship: a three-year fellowship from the Westpac Bicentennial Foundation

2015 Discovery Early Career Award, Australia: a three-year fellowship from the Australian Research Council

2012 Future Engineering Research Leadership Fellowship, ANU, 2012, Canberra, Australia: a five-year research-intensive position at the Australian National University.

2010 Hilti Prize for Innovative Research, ETH Zurich, 2010, Zurich, Switzerland: the annual award for the most innovative PhD thesis at ETH Zurich.

2010 Honorable Mention at the DSM Science and Technology Awards, 2010, Interlaken, Switzerland: an annual award for the top 20 PhD theses among Germany, Austria, Holland and Switzerland.

2010 Finalist MRC Prize, ETH Zurich, 2010, Zurich, Switzerland: the annual award for the top 5% PhD theses in material science at ETH Zurich.

Appointments

Since May 2016	Associate Professor at the Research School of Engineering, College of Engineering and Computer Science of the Australian National University
Since Sept 2015	Delegated Authority for the Higher Degree by Research program at the Research School of Engineering of the Australian National University
Jan 2015 - April 2016	Senior Lecturer at the Research School of Engineering, College of Engineering and Computer Science of the Australian National University
Since Oct 2013	Technical Consultant for Sensirion A.G., Switzerland
Since Feb 2013	HDR Academic Network Convenor in the Research School of Engineering, ANU College of Engineering and Computer Science
Since Sept 2012	Group Leader and Tenure-Track Research Fellow at the Australian National University under the Future Engineering Research Leadership Fellowship Scheme
Feb - Aug 2012	Co-founder Airlab, a spin-off project based on my PhD findings at ETH
2010	Technical Consultant Carl Zeiss AG
2010 - Jan 2012	Lecturer and postdoctoral fellow at the Particle Technology Laboratory, Department of Mechanical and Process Engineering, ETH Zurich

June 2005 - Feb 2010 PhD student at the Particle Technology Laboratory, Department of Mechanical and Process Engineering, ETH Zurich

Nov 2004 - May 2005 Scientific employee at the Professorship for Renewable Energy Carriers, Department of Mechanical and Process Engineering, ETH Zurich

Competitive Research Grants (ca. $A 6M since 2010)

2017 Lead applicant for Discovery Translation Fund - ANU Connect Ventures: "Market Evaluation of the Sprayable Superhydrophobic Coating", $A 50,000.

2016 Co-Applicant for Industrial Transformation Training Centres: "ARC Training Centre for Automated Manufacture of Advanced Composites", $3,815,143.

2016 Single Applicant for Westpac Bicentennial Foundation 2016 Fellowship: "Wearable Nanosensors for Melanoma Prevention", $A 973,216.

2016 Single Applicant for Australian Research Council Discover Early Career Research Award DE160100569: "Ultra-porous Devices by Synergistic and Atomic Layer Deposition", $A 375,000.

2015 Co-applicant for Discovery Translation Fund - ANU Connect Ventures: "One-step synthesis of ultra-porous coatings for titanium implants: encouraging superior integration with bone cells", $A 50,000.

2015 Lead applicant for Australian Research Council Discovery Project DP150101939: "Plasmonic-Semiconductor Chemical Sensors for Non-Invasive Medical Diagnostics", $A 434,000.

2015 Applicant for Major Equipment Committee ANU Grant: "Advancing multicomponent thin film fabrication capability for next generation multifunctional devices", $A 200,000.

2015 Co-Applicant for Australian Research Council LIEF LE160100070: "Automated Fibre Braiding Facility for Multifunctional Structural Materials", $A 241,500.

2014 Lead applicant for Discovery Translation Fund - ANU Connect Ventures: "Transferable Highly Performing Nano-Coatings", $A 91,000.

2013 Lead Applicant for Major Equipment Committee ANU Grant: "Advanced Bio/Functional Characterization Facility", $A 125,000.

2011 Applicant for Swiss Competence Centre for Materials Science and Technology (CCMX) grant: "Structure-activity relationships of metal oxide nanoparticles based gas sensors for non-invasive medical diagnosis by time and surface-resolved XAS-IR" with Dr D Ferri, Dr M Nachtegaal, Dr L Quaroni and Dr J De Paiva Sá, CHF 100,000.- (ca. $A 144,000).

2010 Applicant for Swiss National Science Foundation (SNSF) grant for "Tailored nanodetectors for early stage diagnosis of illnesses from the human breath" with Professor SE Pratsinis, CHF 193,838.- (ca. $A 280,000).

Publication Metrics**

■ Journal articles: 49 ■ Citations: 1730 ■ Average citations per paper: 34.9

■ Conference articles: 12 ■ *h*-index: 20 ■ i10-index: 25 ■ Patent applications: 6

**Metrics collected on February 6th 2017 from Google Scholar.

Top 10 Publications (corresponding author/s marked with*, IF:= journal impact factor)

- A. Tricoli, M. Graf, F. Mayer, S. Kühne, A. Hierlemann and S.E. Pratsinis*, Micropatterning Layers by Flame Aerosol Deposition-Annealing, ***Adv. Mater.***, 20, 3005-3010 (2008) - **IF: 17.5, citations: 80**
- A. Tricoli, M. Graf and S.E. Pratsinis*, Optimal Doping for Enhanced SnO_2 Sensitivity and Thermal Stability, ***Adv. Funct. Mater.***, 18, 1969-1976 (2008) - **IF: 11.8, citations: 113**
- A. Tricoli and S.E. Pratsinis*, Dispersed Nanoelectrode Devices, ***Nature Nanotech.***, 5, 54-60 (2010) - **IF: 34, citations: 68**
- A. Tricoli, M. Righettoni and S.E. Pratsinis*, Anti-fogging Fibrous SiO_2 and Nanostructured SiO_2-TiO_2 Films by Rapid Flame Deposition and In-Situ Annealing, *Langmuir*, **25**, 12578-12584 (2009) - **IF: 4.5, citations: 79**
- A. Tricoli*, M. Righettoni and A. Teleki*, Semiconductor Gas Sensors: Dry Synthesis and Application, ***Angew. Chem.-Int. Edit.***, 49, 7632-7659 (2010) - **IF: 11.3, citations: 219**

- M. Righettoni, A. Tricoli and S.E. Pratsinis*, Si: WO_3 Sensors for Highly Selective Detection of Acetone for Easy Diagnosis of Diabetes by Breath Analysis, ***Anal. Chem.***, 82, 3581-3587 (2010) - **IF: 5.6, citations: 173**
- A. Tricoli*, A.S. Wallerand and M. Righettoni, Highly porous TiO_2 Films for Dye Sensitized Solar Cells, ***J. Mater. Chem.***, **22**, 14254-14261 (2012) - **IF: 6.6, citations: 33**
- W.S.Y. Wong, N. Nasiri, A.L. Rodriguez, D.R. Nisbet, A. Tricoli*, Hierarchical Amorphous Nanofibers for Transparent Inherently Super-Hydrophilic Coatings, *J. Mater. Chem. A*, **2**, 15575-15581 (2014) - **IF: 7.4, citations: 6**
- N. Nasiri, T.D. Elmøe, Y. Liu, Q.H. Qin, A. Tricoli*, Self-assembly Dynamics and Accumulation Mechanisms of Ultra-Fine Nanoparticles, ***Nanoscale***, **7**, 9859-9867 (2015) - **IF: 7.4, citations: 4**
- N. Nasiri, R. Bo, F. Wang, L. Fu, A. Tricoli*, Ultraporous Electron-Depleted ZnO Nanoparticle Networks for Highly Sensitive Portable Visible-Blind UV Photodetectors, ***Adv. Mater.***, 27, 336-4343 (2015) - **IF: 17.5, citations: 16**

Patent Applications

- A. Tricoli and S.E. Pratsinis, Electrical Device, WO 2010/121811 A1, **28 October 2010**
- A. Tricoli, M. Righettoni and S.E. Pratsinis, Process for Providing Super-Hydrophilic Properties to a Substrate, WO 2010/063440 A, **10 June 2010**
- A. Tricoli and D. Nisbet, Nanofilm, PCT/AU2015/000170, Australian Patent Application **24 March 2014**
- A. Tricoli, W.S.Y. Wong, D. Nisbet and V. Craig, *Mesh*, 2014901036, Australian Provisional Patent Application **24 March 2015**
- A. Tricoli, D. Nisbet, N. Nasiri and A.J. Ceramidas, *Porous Coatings*, 2015903426, Australian Provisional Patent Application, **25 August 2015**
- W.S.Y. Wong, A. Tricoli, D. Nisbet, Z. Starchurski, Interpenetrating polymer networks, P151609, Australian Provisional Patent Application, **10 May 2016**

Yours sincerely

Antonio Tricoli