Professor Kourosh Kalantar-Zadeh

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Citizenship: Australian

Employment history

Year	Position	Organisation / Location
Since Jan 2025	Professor and Academic Lead: Research Excellence and Impact Development	Faculty of Engineering, University of Sydney, Australia
Jan 2023 – Dec 2024	Professor and Head of School	School of Chemical and Biomolecular Engineering, University of Sydney, Australia
May 2019 - May 2024	Laureate Fellow	Australian Research Council (ARC), Australia
August 2018 - May 2019	SHARP Professor	University of New South Wales (UNSW), Australia
August 2018 - Dec 2022	Director of the Centre for Advanced Solid and Liquid State Electronics and Optics (CASLEO)	University of New South Wales (UNSW), Australia
August 2018	Honorary Professor	RMIT University, Australia
Jan 2016 - July 2018	Distinguished Professor of Electronic Engineering (one of ten at RMIT)	RMIT University, Australia
Jan 2013 - July 2018	Director of the Centre for Advanced Electronics and Sensors (CADES)	RMIT University, Australia
2013-2015	Professor	RMIT University, Australia
2009-2013	Associate Professor	RMIT University, Australia
2009-2010	Associate Professor and Senior Researcher of Electronics	MIT, USA
Jan 2007-Jan 2009	Senior Lecturer	RMIT University, Australia
July 2002- Dec 2006	Lecturer Level B	RMIT University, Australia
Dec 2001- July 2002	Research Fellow	RMIT University, Australia
1993-1998	Senior Engineer	Parakooh Engineering Co, Iran
1994	Associate Researcher	Stuttgart University, Germany

Briefs on leadership roles and notable achievements

In the past decade:

- **Head of the School of Chemical and Biomolecular Engineering, University of Sydney:** led a school with 21 permanent academics and over 100 other research/teaching staff (full time and part time).
  Notable outcomes: oversaw the increase of the annual leading research grant income by >400%, increase of the enrolment by >20% and enhancement of Student Experience Survey (SES) score by 9 points within just 20 months of assuming this leadership position.
  Design and implementation of new undergraduate program: Environmental Engineering (to commence in Jan 2025).
  Completing the establishment of the research laboratories: Oversaw the completion of the $45M core and research facility at the School of Chemical and Biomolecular Engineering and successfully housed academics into the new facility along with the full utilisation of new infrastructure. I was involved in the procurement and led the installation of $10M worth of equipment.
- **Director of CASLEO, UNSW:** led and directed a research team of 35, including 10 postdoctoral fellows and 15 PhD students under my direct supervision, as well as 10 academic staff whose research I supported and led. Managed an annual budget exceeding $3 million, with ~$2.5 million pers annum obtained from external sources. Helped a record number of applicants at UNSW to successful ARC Laureate Fellowships as their mentor during the application preparation process. Establishing a ~$10M laboratory during my tenure, which is still under full usage hosting new research and development activities after my departure.
- **Director of CADES, RMIT:** directed a team of 25 staff, consisting of 5 postdoctoral fellows, 15 PhD students, and 5 academic staff. Successfully managed an annual budget of over $2 million, with $1.5 million secured through external funding sources.
- **Responsible for infrastructure, RMIT:** from 2008 to 2017, I was responsible for the design and refurbishment of 8 teaching laboratories at the School of Electrical and Computer Engineering and also the development of new ARC FLEET Centre of Excellence research laboratories.
  Design and implementation of two postgraduate programs, RMIT: Biomedical Engineering and Microelectronics Engineering.

Academic qualifications

Year	Qualification	University
2002	PhD in Bioengineering (second major: Chemical Engineering)	RMIT University, Australia
1997	MSc in Telecommunications	Tehran University, Iran
1993	BSc in Electronics	Sharif University of Technology, Iran

Academic Courses Taken

2021	Leadership	CCE Uni Sydney, Australia
2024	Transformational Leadership Program	The University of Sydney, Australia

Industry and commercial activities

Successfully converted research concepts into real products, which have proved attractive for industrial uptake:

- A key person for the development of surfaces acoustic wave biosensors for the UK based biosensor Company, CMI (Cambridge Medical Innovation) Ltd., Cambridge (now the Cambridge research and development centre for Alere Inc), 2003 to 2008. For this project, received industrial grants from AusIndustry (Biotechnology Innovation Fund - BIF – fabrication of biosensors) in 2003
- Development of the key crystal metal oxide technology for electronic widows which is now used in Boeing 787 Dreamliners, 2003-2005
- DSTO, fabrication of humidity and strain sensors in 2004-2005
- CSIRO, fabrication of RF ID tags and development of membranes for farm sensor nodes, which are still used in farms in Australia and New Zealand, in 2006
- ARC Linkage grants with ALCOA and BHP Billiton companies for the development of mercury sensors in 2010-2013
- The development of gas sensor capsule, which was in collaboration with CSIRO, under a Department of Agriculture funded project passed the pilot tests and deployed in many farms in Australia to assess the effect of ruminants' feed and diet on mitigating greenhouse gases including methane, 2011 to 2015
- A large contract with Veolia, France, for the development of control systems for anaerobic fermentation plants, 2016 and 2017
- Development of human gas sensor capsules –partnership with Planet Innovation for establishing a start-up company: Atmo BioSciences in 2018. The company expanded to branches in Melbourne, Sydney and San Diego with >50 staff.
- Establishment of start-up company Liquid Metal Plus (LM+) funded by UniSeed in 2021
- Joint project for Sydney Water for developing efficient high pressure membranes for water filtration, Since 2023
- A large project for Contract Resources Company on new industrial cleaning reagents, 2024

Australian and internationally filed patents:

1. 2002, Surface acoustic wave sensor, IP Australia App. No. 2002308401, US 10/492, 153, EP 02801811.7, Canada TBA, Microtechnology Centre Management Limited; **Kalantar-zadeh, K**.; Wlodarski, W.
2. 2002, Surface acoustic wave device, IP Australia App. No. 2002308402 Microtechnology Centre Management Limited; **Kalantar-zadeh, K.**; Wlodarski, W
3. 2004, Layered surface acoustic Wave sensor, IP Australia App. No. 2004900942 Microtechnology Centre Management Limited; **Kalantar-zadeh, K**.
4. 2012, Anodised Niobium Oxide Photoanode for Dye Sensitized Solar Cells, **Kalantar-zadeh K.,** Ou J.Z., PCT/AU2012/001223
5. 2015, Gas sensor nanocomposite membranes, **Kalantar-zadeh K**., Berean K., Ha N, Ou

J.Z., AU2014903506, US 20170284956, EP 15837547

6. 2015, NO_x gas sensor, **Kalantar-zadeh K**., Ou J.Z., Li Y.X., Ha N., PCT/AU2016/000199
7. 2016, Gas chromatography capsule, **Kalantar-zadeh K**., Berean K., Ha N, Ou J.Z., PCT/AU2017/000167
8. 2017, Multi-gas sensing system, Chrimes A., Ou J.Z., Ha N., **Kalantar-zadeh K**., Australian provisional patent application no. 2017901645
9. 2020, Daeneke T., **Kalantar-zadeh K**., Methods for depositing transparent conductive oxides, Australian provisional patent application No. 2019904059
10. 2021, **Kalantar-zadeh K**., Daeneke T., Esrafilzadeh D, Catalysts comprising liquid metals and uses thereof, Australian provisional patent application 2019903954
11. 2023, Trujillo, F. J., **Kalantar-Zadeh, K**. Brewing device, Australian provisional patent application No. 2023903956

Commercial Exhibitions

- Organising a stand at the Digestive Disease Week Exhibition (for presenting human gas sensor capsules), San Diego Exhibition Centre, San Diego, USA, May 21-24, 2016
- Organising a stand at the Sensors + Tests 2016, The Measurement Fair (for presenting human gas sensor capsules), Nurnberg, Germany, 10-12 May, 2016

Awards and Distinctions

- **Clarivate Analytics - Highly Cited Researchers**, 2024
- **Clarivate Analytics - Highly Cited Researchers**, 2023
- **Clarivate Analytics - Highly Cited Researchers**, 2022
- **Clarivate Analytics - Highly Cited Researchers**, 2021
- **Robert Boyle Prize for Analytical Science, Royal Society of Chemistry (RSC), UK,** 2020
- **Clarivate Analytics - Highly Cited Researchers**, 2020
- **Royal Society of New South Wales, Walter Burfitt Prize**, 2019
- **Clarivate Analytics - Highly Cited Researchers**, 2019
- **The 12 most viewed LinkedIn profiles in Australia, LinkedIn Spotlight for Australia,** 2019
- **Clarivate Analytics - Highly Cited Researchers**, 2018
- **American Chemical Society (ACS), Advances in Measurement Science Lectureship Awards (Asia/Pacific),** 2018 (granted in February 2018 at Pittcon, Orlando, FL, USA)
- **Institute of Electrical and Electronics Engineers (IEEE) Sensors Council Technical Achievement Award in the area of Sensors (advanced career),** 2017 (granted in September at IEEE Sensors Conference, Glasgow, UK)
- **Alan Finkel Award, Royal Australian Chemical Institute (RACI), Australia**, 2017
- **Finalist of the International AMA Sensorik und Messtechnik - AMA Innovation Award,** 2016
- **Media Star of the year, RMIT University**, 2015
- **Runner up of the Australian Academy of Sciences, Honorific Award in Engineering,** 2014

- **RMIT University Award for Research Excellence,** 2014
- **RMIT Vice-Chancellor's Award for Research Supervision Excellence,** 2014
- **Research Paper Media Star, RMIT University**, 2013
- **International Media Star, RMIT University**, 2012
- **Office for Learning and Teaching (OLT), Australia, Citations for Outstanding Contributions to Student Learning**, 2011
- **RMIT Foundation International Research Exchange Fellowship** (with Professor Kaner, UCLA), 2011
- **Chosen as the face of the American Chemical Society (ACS - Ref: Chem. Eng. News 2010)**, 2010
- **Australian Academy of Sciences, Travel Award to North America,** A$9,400, 2009
- **RMIT Research Leave Award,** 2008
- **RMIT Teaching Awards, Certificate of Achievement in the Physical Sciences and Related Studies**, 2008
- Runner up of the **RMIT Emerging Researcher Award,** 2007
- **Endeavour Australia Award** (fellowship award for a six-month sabbatical), 2005
- **CASS Foundation Travel Awards**, 2003, 2004, and 2008
- **IEEE Ultrasonics Society Early Career Researcher Travel awards,** 2003 and 2004

Spin off companies

In the past decade:

- **LM Plus Technologies**, Founder, 2021
- **Atmo Bioscience**, Founder and Lead Scientific Advisor, 2018

Sabbaticals (6 months each)

- **UCLA**, USA, 2009
- **The University of Cambridge,** UK, 2007
- **Chinese Academy of Sciences**, Shanghai, China, 2004

Society fellowships and memberships

- **Fellow of the Institution of Engineers Australia** (IEAust), Australia
- **Fellow of the American Association for the Advancement of Science** (AAAS), USA
- **Fellow of Royal Australian Chemical Institute** (RACI), Australia
- **Fellow of the Royal Society of New South Wales**, Australia
- **Fellow of Royal Society of Chemistry** (RSC), UK
- **Fellow of Institution of Engineering and Technology** (IET), UK
- **Senior member of Institute of Electrical and Electronics Engineers** (IEEE), USA
- Member of Materials Research Society (MRS) and American Chemical Society (ACS)

Teaching activities

Major courses thought and coordinated in the past two decades:

- Engineering for a Sustainable Society
- Nanosensors
- Nanotechnology
- Electronic Circuits Third Year
- Electronic Circuits Second Year
- Signal and Systems
- Materials in Microelectronics
- Semiconductors in Electronics
- Sensors and Actuators
- Thesis Preparation
- Food Processing Principles
- Advanced Reaction Engineering

Curriculum Development Activities

I have played a key role in shaping diverse curricula at various universities:

- Co-led the development of the BSc in Biomedical Engineering program at RMIT, which successfully attracted over 120 students annually during my tenure and after.
- Led the development of the Masters of Electronics and Electrical Engineering program at RMIT, which consistently enrolled more than 60 students per year until my departure in 2018.
- Although not directly involved in curriculum development at UNSW, I made significant contributions in relevant educational programs for Masters by coursework degrees.
- Led the development of a forthcoming program entitled “Environmental Engineering” at the University of Sydney, scheduled to be launched in Jan 2025.

Supervisions

Current PhD students

1- Moonika Sari Widjajana
2- Luis Gustavo Campos
3- Shi-Hao Chiu
4- Nieves Maria Flores March
5- Md Hasan Al Banna Banna
6- Li Liu
7- Yuqin Zhang
8- Masoomeh Asghar Negad
9- Hebah Al-Fayyad

As the first PhD supervisor (graduation year, name):

1- 2024, Jiewei Zheng
2- 2024, Maedehsadat Mousavi
3- 2023, Shengxiang Cai

4- 2023, Roozbeh Abbasi
5- 2022, Chengchen Zhang
6- 2022, Yifang Wang
7- 2022, Franco Centurión
8- 2022, Mahroo Baharfar
9- 2022, Salma Merhebi
10- 2022, Junma Tang
11- 2022, Michael Christoe
12- 2022, Jialuo Han
13- 2021, Shuhada Atika Idrus Saidi
14- 2019, Nitu Seyed
15- 2019, Naresh Pillai
16- 2019, Robi Datta
17- 2018, Ali Zavabeti
18- 2018, Paul Atkin
19- 2018, Benjamin Carey
20- 2017, Rhiannon Clark
21- 2017 Emily Nguyen
22- 2016, Wang, Yichao
23- 2016, Zhang, Wei
24- 2016, Alsaif, Manal MYA
25- 2015, Yi, Pyshar
26- 2015, Ab Kadir, Rosmalini
27- 2015, Berean, Kyle
28- 2014, Nour, Majid Kamal
29- 2014, Abdul Rani, Rozina
30- 2014, Yao, David
31- 2014, Zoolfakar, Ahmad
32- 2013, Balendhran, Sivacarendran
33- 2013, Walia, Sumeet
34- 2013, Chrimes, Adam
35- 2012, Ou, Jian
36- 2012, Kayani, Aminuddin
37- 2011, Zheng, Haidong
38- 2011, Breedon, Michael
39- 2010, Zhang, Chen
40- 2009, Dhawan, Deepak
41- 2007, Nguyen, Ty

As the second supervisor:

1- 2023, Lucy Johnston (together with Dr. Jianbo Tang)
2- 2022, Sahar Nazari (together with Dr Jianbo Tang)
3- 2022, Richard Fuchs (together with Dr Jianbo Tang)
4- 2021, Mohamed Kilani (together with Prof. Guangzhao Mao)
5- 2021, Yuan Chi (together with Dr Jianbo Tang)
6- 2016, Ha, Nam (together with Dr. Jian Ou)
7- 2016, Mojiri, Ahmad (together with Prof Gary Rosengarten)
8- 2014, Nili Ahmadabadi, Hussein (together with A/Prof. Sharath Sriram)
9- 2014, Zeller, Eike (together with Prof Arnan Mitchell)

10- 2013, Nasabi, Mahyar (together with Prof Arnan Mitchell)
11- 2013, Campbell, Jos (together with Prof Vipul Bansal)
12- 2013, Wong, Kester Wen Jie (together with Prof Irene Yarovski)
13- 2013, Ahmad, Muhammad (together with Prof Wojtek Wlodarski)
14- 2012, Yaacob, Mohd (together with Prof Wojtek Wlodarski)
15- 2011, Szpakolski, Katherine (together with Assoc Prof Kay Latham)
16- 2011, Yu, Jerry (together with Prof Wojtek Wlodarski)
17- 2011, Tovar Lopez, Francisco (together with Prof Arnan Mitchell)
18- 2011, Shafiei, Mahnaz (together with Prof Wojtek Wlodarski)
19- 2009, Arsat, Rashidah (together with Prof Wojtek Wlodarski)
20- 2008, Sadek, Abu (together with Prof Wojtek Wlodarski)
21- 2008, Kandasamy, Sasikaran (together with Prof Wojtek Wlodarski)
22- 2007, Matthews, Glenn (together with Prof Wojtek Wlodarski)
23- 2006, Powell, David (together with Prof Wojtek Wlodarski)
24- 2006, Ippolito, Samuel (together with Prof Wojtek Wlodarski)

Conference presentations and invited addresses at conferences

Presented at over 200 international conferences and workshops as well as public talks

Selected Invited, Keynote and Plenary talks (since 2011)

- ***Invited talk***: Materials Research Society (MRS) Spring Meeting, April 2025, Seattle, Washington, USA
- ***Plenary talk***: Advanced Materials and Sustainable Technologies, December 2024, Hobart, Australia
- ***Keynote talk*****:** American Chemical Society Fall 2024 Meeting, August 2024, Denver, USA
- ***Plenary talk*****:** ANZNMF Conference, July 2024, Orange, Australia
- ***Keynote talk*****:** 14th Nanomedicine conference, June 2024, Sydney, Australia
- ***Invited talk***: European Materials Research Society (E-MRS), May 2024, Strasbourg, France
- ***Plenary talk***: The 7th Nanogenerators and Piezotronics Conference, May 2024, Madison, USA
- ***Keynote talk***: The 9th International Conference on Nanoscience and Nanotechnology (ICONN 2024), February 2024, Melbourne, Australia
- ***Invited talk***: Croucher Advanced Study Institute: Medical Robots with Soft/Miniature Designs: From Bench to Bedside, 2024, Hong Kong
- ***Keynote talk***: Chemeca, October 2023, Auckland, New Zealand
- ***Keynote talk***: 2023 International Conference on Materials Innovation (ICMI23), Brisbane, Australia
- ***Invited talk***: International Conference on Materials for Advanced Technologies (ICMAT), June 2023, Singapore
- ***Keynote talk***: Sydney Biomed & Health Symposium, May 2023, Sydney, Australia
- ***Invited talk***: European Materials Research Society (E-MRS), May 2023, Strasbourg, France
- ***Keynote talk***: The 10th biannual conference series on Advanced Materials and Nanotechnology (AMN10), Feb 2023, Rotorua, New Zealand
- ***Invited talk***: American Chemical Society Fall Meeting, August 2022, Chicago, USA
- ***Keynote talk*****:** RACI National Congress, July 2022, Brisbane, Australia

- ***Keynote talk*****:** Chemical Nanosensor Australia (CNA), March 2022, Melbourne, Australia
- ***Keynote talk*****:** International Conference on Flexible Electronics, November 2021, China
- ***Keynote talk*****:** Virtual Vacuum Congress, October 2021, Australia
- ***Invited talk*****:** American Chemical Society Spring Meeting, April 2021, USA
- ***Plenary Talk*****:** ARC Graphene Research Hub Workshop, March 2021, Adelaide, Australia
- ***Keynote Talk*****:** Global Nanobiotechnology Consortium E-Conference (GNC), March 2021, Florida, USA
- ***Keynote talks*****:** World Nano Congress on Advanced Science and Technology (WNCST2021), March 2021, India
- ***Plenary talk*****:** International Conference on Nanoscience and Nanotechnology (ICONN 2021), February 2021, India
- ***Keynote talk*****:** The 8th International Conference on Nanoscience and Nanotechnology (ICONN 2020), February 2020, Australia
- ***Plenary talk:*** 2019 International Conference on Nanospace Materials, October 2019, Brisbane, Australia
- ***Plenary talk:*** 2019 International Symposium on Energy Conversion and Storage Material, August 2019, Brisbane, Australia
- ***Plenary talk*****:** The 4th International Conference on Manipulation, Automation, Robotics at Small Scales, July 2019, Helsinki, Finland
- ***Keynote talk*****:** The 3rd International Conference on Applied Surface Science, June 2019, PISA, Italy
- ***Invited talk***: Materials Research Society (MRS) Spring Meeting, April 2019, Phoenix, Arizona, USA
- ***Plenary talk:*** International Symposium on Future Materials, January 2019, Wollongong, Australia
- ***Keynote talk:*** The 3rd International Conference on Emerging Advanced Nanomaterials, October 2018, Newcastle, Australia
- ***Keynote talk:*** Emerging Innovation Summit, October 2018, Melbourne, Australia
- ***Keynote talk:*** The 9th International Nanomedicine Conference, June 2018, Sydney, Australia
- ***Plenary talk*****:** Annual conference of CMOS Emerging Technologies Research, May 2018, Whistle, Canada
- ***Invited talk:*** the Pittsburgh Conference on Analytical Chemistry and Applied Spectroscopy (Pittcon), Feb 2018, Orlando, Florida, USA
- ***Invited talk*****:** 2017 Materials Research Society (MRS) Meeting & Exhibition, Dec 2017, Boston, Massachusetts, USA
- ***Invited talk:*** 2017 Recent Progress in Graphene & 2D Materials Research, Sep 2017, Singapore
- ***Invited talk*****:** Australian Gastroenterology Week (AGW) 2017, Gold Coast, Aug 2017, Australia
- ***Keynote talk*****:** International Symposium on Energy Conversion and Storage Materials, Aug 2017, Brisbane, Australia
- ***Invited talk*****:** 2017 Materials Research Society (MRS) Meeting & Exhibition, Apr 2017, Phoenix, Arizona, USA
- ***Plenary talk***: The Emerging Sensing Technologies Summit 2016 (ESTS'16), Dec 2016, Melbourne, Australia
- ***Plenary talk*****:** The 5th Beneficial Microbes Conference, Oct 2016, Amsterdam, the Netherlands

- ***Keynote talk*:** The Materials Science & Technology 2016 (MS&T 2016), Oct 2016, Salt Lake City, USA
- ***Invited talk*:** The 18th International Symposium on the Physics of Semiconductors and Applications (ISPSA 2016), July, 2016, Jeju, Korea
- ***Invited talk*:** The Conferences Internationales Matiaux et Technlogies (CIMTEC), June, 2016, Perugia, Italy
- ***Public invited talk*:** Public talk at the University of San Deigo, California (on human gas sensor capsules), May 2016, San Diego, USA
- ***Invited talk*:** The 5th International Symposium on Graphene Devices (ISGD-5), July 2016, Brisbane, Australia
- ***Invited talk*:** 7th annual Recent Progress in Graphene and Two Dimensional Materials Research Conference, Oct 2015, Lorne, Australia
- ***Invited talk*:** NanoS-E3 Workshop, Sep 2015, Gold Coast, Australia
- ***Invited talk*:** Anaerobic Plants, Workshop by Veolia France, Aug 2015, Sydney, Australia
- ***Invited talk*:** The Symposium on Two-dimensional Nanomaterials, 2015, Melbourne, Australia
- ***Invited talk*:** 3rd biennial conference of combined Australian Materials Societies, 2014, Sydney, Australia
- ***Invited talk*:** The AISRF workshop on Nano Materials for Renewable Energy, 2014, Melbourne, Australia
- ***Invited talk*:** Australia-India Workshop, 2013, Melbourne, Australia
- ***Invited talk*:** The CMOS Emerging Technologies Conference, 2013, Whistler, Canada
- ***Invited talk*:** New Frontier on Advanced Functional Nanomaterials, Thailand - Australia Symposium, 2012, Bangkok, Thailand
- ***Invited talk*:** Aus-India Workshop, 2011, Melbourne, Australia
- ***Invited talk*:** NanoS-E3 Workshop, 2011, Gold Coast, Australia

Conference and meetings organisations

Selected conference organisations

- **International Program Committee:** The 17th International Conference on Near Field Optics, Nanophotonics and Related Techniques (NFO-17), Melbourne, Australia, December 2024
- **Oversight Committee:** IEEE International Conference on Flexible and Printed Sensors and Systems (IEEE FLEPS), Scotland, June 2024
- **International Program Committee:** BIODEVICES (BIOSTEC), the 17th International Joint Conference on Biomedical Engineering Systems and Technologies, Italy, Feb 2024
- **Steering Committee:** IEEE International Conference on Flexible and Printed Sensors and Systems (IEEE FLEPS), Scotland, June 2023
- **Steering Committee:** IEEE International Conference on Flexible and Printed Sensors and Systems (IEEE FLEPS), Scotland, June 2022
- **Steering Committee:** IEEE International Conference on Flexible and Printed Sensors and Systems (IEEE FLEPS), Scotland, June 2021
- **Technical Program Chair:** IEEE Sensors conference, Sydney, Australia, October 2021 (passed over the role in June 2021)
- **International Advisory Board:** International Conferences on Modern Materials and Technologies, CIMTEC, Terme, Italy, June 2020
- **Track Chair:** Chemical, Electrochemical and Gas Sensors, IEEE Sensors Conference, Montreal, Canada, October 2019

- **Steering Committee:** IEEE International Conference on Flexible and Printed Sensors and Systems (IEEE FLEPS), Glasgow, Scotland, July 2019
- **Organising Committee:** Single-Molecule Sensors and NanoSystems International Conference – S3IC 2019, Munich, Germany April 2019
- **Program Committee Member** for the 12th International Conference on Biomedical Electronics and Devices, BIODEVICES 2018, Porto, Portugal, Jan 2019
- **Track Chair of Chemical, Electrochemical and Gas Sensors,** IEEE Sensors Conference, New Delhi, India, October 2018
- **Scientific Advisory Board** 17th International Meeting on Chemical Sensors, Vienna, Austria, July, 2018
- **Program Committee Member** for the 12th International Conference on Biomedical Electronics and Devices, BIODEVICES 2018, Porto, Portugal, Jan 2018
- **Program Committee Member** for the 11th International Conference on Biomedical Electronics and Devices, BIODEVICES 2017, Porto, Portugal, Feb 2017
- **Symposium Co-chair** for the topic of "Thin Film and Surface Engineering" at the 9th Pacific Rim International Conference on Advanced Materials and Processing, Kyoto, August 2016
- **Co-Chair,** the 7th annual Recent Progress in Graphene and Two Dimensional Materials Research Conference 2015 (RPGR2015), Lorne, Australia, Oct 2015
- **Program Committee Member,** Recent Advances on Mechanics Materials, Mechanical Engineering and Chemical Engineering, Barcelona, Spain, April 2015
- **Program Committee Member,** New Developments in Biology, Biomedical and Chemical Engineering and Materials Science, Vienna, Austria, March 2015
- **International Advisory Board Member,** the 5th International Conference on Recent Advances in Materials, Minerals & Environment (RAMM) & 2nd International Postgraduate Conference on Materials, Mineral and Polymer (MAMIP), Universiti Sains, Malaysia, August 2015
- **Organiser,** the Symposium on Two-dimensional Nanomaterials, Melbourne, Australia, March 2015
- **Program Committee Member,** the 2014 International Conference on Energy, Environment and Material Science, Saint Petersburg, Russia, September 2014
- **Organising Committee Member**, IEEE Sensors, Valencia, Spain, November 2014
- **Organising Committee Member**, the Australia-India Joint Symposium on Smart Nanomaterials, Melbourne, Australia, November 2011
- **Technical Chair**, the 13th International Meeting on Chemical Sensors (IMCS), Perth, Australia, July 2010
- **Organising Committee Member**, The 5th Asia-Pacific Conference on Transducers and Micro/Nano Technologies (APCOT), Perth, Australia, July 2010
- **Organising Committee Member**, IEEE Sensors, New Zealand, Christchurch, October 2009
- **Conference co-chair,** International Symposium on Smart Materials, Nano- and Micro-Smart Systems, the international society for optics and photonics (SPIE), Melbourne, Australia, December 2008
- **Conference co-chair,** International Symposium on BioMEMS and Nanotechnology, (SPIE), Melbourne, Australia, Canberra December 2007

Committee, Editorial and Review duties

- **Associate Editor:** FlexTech (Wiley Publications, since 2024)
- **Senior Editorial Board Member:** Exploration (Wiley Publications, since 2023)
- **Editorial advisory board:** ACS Applied Engineering Materials (American Chemical Society, since 2022)
- **Associate editor:** ACS Applied Nano Materials (American Chemical Society, since 2021)
- **Advisory board member:** Materials Future (Institute of Physics (IOP) Science, since 2021)
- **Advisory board member:** Nanoscale (Royal Society of Chemistry (RSC), since 2020)
- **International advisory board:** ACS Nano (American Chemical Society, since 2019)
- **Editorial board member:** Molecules (MDPI, since 2019)
- **International advisory board:** Advanced Materials Technologies (Wiley Publications, since 2018)
- **Editorial advisory board:** ACS Applied Nano Materials (American Chemical Society, 2018-2020)
- **Editorial board:** Applied Sciences (MDPI, since 2018)
- **Editorial board:** Smart Science (Taylor & Francis, since 2018)
- **Lead scientific advisor:** Atmo BioScience, Australia (since 2018)
- **Editorial advisory board:** ACS Sensors (American Chemical Society, since 2017)
- **Editorial board and advisory board:** Sensors (MDPI, since 2017 and since 2020)
- **Editorial board:** Scientific Reports (NPG, 2017-2019)
- **Editorial board:** Applied Materials Today (Elsevier, since 2016)
- **Editorial board member:** Nano-Micro Letters (Springer, 2016-2022)
- **Editorial board:** Biosensors (MDPI, since 2015)
- **Editorial board:** AIMS Materials Science (since 2013) and AIMS Electronics (since 2017)
- **Advisory board on Nanotechnology and Sensors, Lifeboat Foundation, USA** (since 2013)
- **Editorial board:** Journal of Sensors (Hindawi, 2006-2017)
- **Frequent associate guest editor:** IEEE Sensors Journal (since 2008)
- **Conference proceedings editor:** BioMEMS and Nanotechnology III (Proceedings of SPIE, December 2007), D. V. Nicolau, D. Abbott, K. Kalantar-zadeh, T. Di Matteo (Author), S.M. Bezrukov (ISBN-10: 081946970X)
- **Conference proceedings editor:** Smart Structures, Devices, and Systems IV (Proceedings of SPIE, December 2008), S.F. Al-sarawi, V. K. Varadan, N. Weste, K. Kalantar-zadeh (ISBN-10: 0819475203)
- **Frequent reviewer for the following Journals**: Nature Nanotechnology, Advanced Materials, Advanced Functional Materials, ACS Nano, Small, Nanotechnology, Langmuir, and Nano Letters.

<u>Reviewer for grant applications for</u>:

- ARC grants, Australia
- Medical Sciences Council of New Zealand, New Zealand
- New Zealand Ministry of Business, Innovation and Employment (MBIE)

- UK Science Council, UK
- French Academy of Sciences, France
- Science and Education Ministry, Estonia
- National Centre for Science and Technology Evaluation, Kazakhstan
- Research Council, Luxemburg
- Agency for Science, Technology and Research, Singapore
- The Ministry of Higher Education and Science, Denmark
- Ministry of Education, Youth and Sports, Czeck
- Deutsche Forschungsgemeinschaft (DFG), Germany
- The Netherlands Organisation for Scientific Research (NWO), the Netherlands

Media interviews / opinion pieces

My work has been constantly featured in Australian and international media (>350 in the past 10 years). Some of the most significant media releases and opinion pieces are as follows:

1- **The Chemical Engineering**, Liquid Metal: a Catalyst for Change?, 1 Feb, 2024
2- **Chemistry World,** The liquid metals giving catalysis a new phase, 26 July 2023
3- **News.com.au,** The Shawshank Redemption: Surprising fact about film's ending, 20 May, 2023
4- **Chemistry World,** Liquid gallium gives platinum catalyst huge activity boost, 17 JUNE 2022
5- **The Economist,** How to build machines from liquid metal, 11 December, 2021
6- **Physics World,** 'Zebra stripe' patterns form on solidifying metal alloys, 01 February 2021
7- **IEEE Spectrum,** Can Two-dimensional Semiconductors Created Using Liquid Metals Forestall Moore's Law's Demise?, 20 October, 2020
8- **Physics World,** Improved carbon capture turns CO_2 into energy storage material, 09 March, 2019
9- **Daily Mail,** Researchers unveil radical 'fart sensor' pill that can monitor the gas inside your body in real-time, 23 January, 2019
10- **South China Morning Post,** Smart paints to colour our world – capture energy and stay connected, 3 December 2018
11- **The Engineer,** Australian nanofilter promises rapid access to clean water, 23 November, 2018
12- **India today,** This low-cost portable filter can clean dirty water 100 times faster than a normal one!, 28 September, 2018
13- **BBC**, Gas detecting pill could diagnose poor gut health, 23 January, 2018
14- **Newsweek**, Scientists Invent Incredibly Thin Metal that can be Made in Your Kitchen, 20 October, 2017
15- **NBC,** This Paint May Pick Up Where Solar Panels Leave Off, 28 June, 2017
16- **Herald Sun,** Colonoscopies are a pain in the backside and could be replaced by a smart pill, 29 April, 2017

17- **The Age and Sydney Morning Herald**, Gut feeling: the swallowable gut sensor that could replace a colonoscopy, January, 2107
18- **Live Science,** Can Eating Cinnamon Cool Off the Stomach? 5 October 2016
19- **Australian Science,** Digestible Gas Sensors Diagnose Irritable Bowel, September, 2016
20- **IEEE Spectrum,** Human Life is a Gas, 16 January 2016
21- **Christian Science Monitor,** Smartphones could detect pollution, thanks to a sensor breakthrough, 27 October 2015
22- **The Companies and Markets**, Global smart pills market researchers have begun developing a pill that measures intestinal gas, 30 April 2015
23- **Time Magazine,** Gas-Sensing Pills May Detect Underlying Stomach Problems, 13 March 2015
24- **NPR,** Before The Gas Is Passed, Researchers Aim To Measure It In The Gut, March 2015
25- **The Age,** Aussie scientists' breakthrough could mean thinner, faster and lighter gadgets, 5 January 2013
26- **ABC Science**, Boost in low-cost solar cell efficiency, 31 May 2012
27- **Australian Manufacturing Technology Magazine**, One on one with Dr Kourosh Kalantar-zadeh, May 2012
28- **Scientific American**, Unexpected discovery of new power sources, 13 February 2012

Others

Professional illustrator, and animator (1987-1996)
Winner of >10 major international prizes for illustrations
Published in media such as The New Yorker
Produced and directed 3 aminations – one awarded by UNESCO and shown in 150 countries in 1996-1997

Publications

- **>525 co-authored papers**
- **Total citations: >53,000 according to Scopus, ~50,000 according to Web of Science and nearly 65,000 according to Google Scholar** (15/05/2025).
- ***h*-index: 107 according to Scopus and Web of Science and 118 according to Google Scholar** (15/05/2025).
- Members of my group are underlined.

Scholarly books

1. **K. Kalantar-zadeh**, *Sensors: An Introductory Course*, Springer, USA (2013) [ISBN: 9781461450511]

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Scholarly book chapter

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5. Ghasemian MB, Tang J, Rahim MA, Tang J, **Kalantar-Zadeh K,** Advances in liquid metal composites: properties, applications, and future prospects, **Trends in Chemistry**, 2024, 6, 79-94.
6. Tang J, Christofferson AJ, Sun J, Zhai Q, Kumar PV, Yuwono JA, Tajik M, Meftahi N, Tang J, Dai L, Mao G, Russo SP, Kaner RB, Rahim MA, **Kalantar-Zadeh K**, Dynamic configurations of metallic atoms in the liquid state for selective propylene synthesis, **Nature Nanotechnology**, 2024, 19, 275-276.
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immunosensing applications. Proceedings of SPIE - The International Society for Optical Engineering; 2001.

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Grants

Project and names of CIs	Role	Organization and grant #	Start	Duration	Amount
Category 1 grants					
Liquid metal solvents for high entropy and atomically configured systems, **K Kalantar-Zadeh;** FM Allioux; S Russo; R Buonsanti	Leader	ARC Discovery Project -DP240101086	2024	3 years	$587,000
Accessing Liquid Noble Metals for Low Temperature Chemical Reactions, **K Kalantar-Zadeh,** MA Rahim, N Gaston	Leader	ARC Discovery Project -DP230102813	2023	3 years	$609,000
The ARC Research Hub for Advanced Manufacturing with 2D Materials (AM2D), M Majumder, D Losic, **K Kalantar-Zadeh,** N Choudhury, R Tabor, D Dubal, N Medhekar, A Polyzos, M Shaibani, M McLaughlin, J Tsanaktsidis	Chief Investigator	ARC Industrial Hub, IH210100025	2021	5 years	$4,379,165
Re-discovering liquid metals from core to surface, **K Kalantar-zadeh**	Fellow and leader	ARC Laureate Fellowship, FL180100053	2019	5 years	$3,162,000
Ingestible capsules for sensing gut metabolites, **K Kalantar-zadeh,** P Gibson, J Muir, C McSweeney	Leader	NHMRC Development Grant, APP1154969	2019	2 years	$615,000
ARC Centre of Excellence in Future Low-Energy Electronics Technologies M Fuhrer, A Hamilton , E Ostrovskaya, K Helmerson, X Wang, **K Kalantar-zadeh**, Q Bao, D Culcer, J Davis, M Davis, O Klochan, N Medhekar, M Parish, J Seidel, A Schiffrin, O Sushkov, N Valanoor, C Vale, L Wang, J. Cole	Chief Investigator	ARC Centre of Excellence, EI170100038	2017	7 years	$33,400,000 ($170,000 per annum to Kourosh Kalantar-zadeh)

Harnessing properties of liquid metals for future devices, **K Kalantar-zadeh**, A O'Mullane, K Khoshmanesh, M Dickey	Leader	ARC Discovery Project -DP170102138	2017	3 years	$508,000 (released to RMIT in 2018)
Establishing advanced networks for air quality sensing and analyses, L Morawska, **K Kalantar-zadeh**, N Motta, B Mullins, G Ayoko, Z Ristovski, M Mazaheri, S Clifford, M Dunbabin, P Thai, L Gonzalez, D Tjondronegoro, M Riley, Y Scorgie, D Wainwright, G Fisher, K Steer, E Ebert, J Hao	Chief Investigator	ARC Linkage Grant, LP160100051	2016	3 years	$445,000 +$400,000 from industrial sources
Investigation of electronic and optical properties of two dimensional transition metal oxides and dichalcogenides, **K Kalantar-zadeh**, M Bhaskaran, M Strano	Leader	ARC Discovery Grant, DP140100170	2014	3 years	$270,000
Human gas capsule, **K Kalantar-zadeh**, P Gibson, J Muir, C McSweeney	Leader	NHMRC Development Grant, APP1075568	2014	2 years	$515,000
Micro Urban Solar Integrated Concentrators (MUSIC), G. Rosengarten, J. Andrews, **K. Kalantar-zadeh,** A. Mitchell, J. Ghirardello	Chief Investigator	Australian Government, Australian Renewable Energy Agency Grant	2013	4 years	$4,450,000
Developing gas selective membranes to improve methane gas measurement **K Kalantar-zadeh**, A Ball, C McSweeney	Leader	Department of Agriculture Forestry and Fisheries - Filling the Research Gap	2012	3 years	$840,000
Development of Nanostructured membranes **K Kalatar-zadeh,** Sharath Sriram, Madhu Bhaskaran	Leader	The CSIRO Sustainable Agriculture Flagship	2012	1 year	$50,000
Measuring and Managing Methane Emissions from Livestock: from Laboratory to	Chief Investigator	The CSIRO Flagship Cluster	2012	3 years	$3,000,000

Landscape, D Chen, **K Kalantar-zadeh**, B. Orr, F. Kelliher, P Vercoe R. Hegarty	(leader at RMIT)				
Highly Sensitive & Robust Nanoengineered Gold Surfaces for Sensing Mercury Vapor in Environmentally Harsh Industrial Processes and Effluents, S Bhargava, **K Kalantar-zadeh**, A O'Mullane, V Bansal, S Ippolito, S Renberg, I Harrison	Chief Investigator	ARC Linkage Grant - LP100200859	2010	3 years	$290,000 +$470,000 from BHP Billiton and Alcoa
Formation of Nanoporous TiO_2 by Anodization of Titanium Thin Films, Discovery grant, Investigators: **K Kalantar-zadeh**, W Wlodarski, Y Li	Project Leader	ARC Discovery - DP0770349	Jan 2007	3 years	$180,000
Barium Strontium Titanate Thin Films for Tunable Microwave Applications, Linkage International grant, Investigators: K Ghorbani, **K Kalantar-zadeh,** A Mitchell, A Safari, M Allahverdi, A S Holland	Chief Investigator	ARC Linkage International, LX0561966	Jan 2005	1 year	$10,000
Other Australian Governmental Grants					
Platform for in-situ nanomechanical testing, under extreme environments, X Liao, R Niu, YS Chen, **K Kalantar-Zadeh**, J Cairney, H Li, B Gludovatz, C Wang, P Burr, Z Huang, L Yang, S Mateti, Q Cai, TBT Nguyen	Chief Investigator	ARC LIEF Grant - LE240100049	Jan 2023	1 year	$1,200,000
High performance chalcogenide processing addressing grand challenges. A Ho-Baillie, **K Kalantar-Zadeh**, M Batmunkh, A Mahmud, M Lyu, N Nasiri, J Zheng, J Ou, B Eggleton, A Page	Chief Investigator	ARC LIEF Grant - LE230100121	Jan 2023	1 year	$500,000
A platform for probing nanoscale magnetic states under multiple actuations. T. Wu; J. Yi; **K. Kalantar-Zadeh**; X.	Chief Investigator	ARC LIEF Grant - LE210100086	Jan 2021	1 year	$489,250

Wang; R. Zheng; Y. Liu; D. Chu; Z. Cheng; F. Li; R. Joshi; C. Cazorla; C. Scarlett; T. Ma					
In-situ Environmental Electron Microscopy Facility, R. Tilley, R. Amal, **K. Kalantar-Zadeh**, J. J. Gooding, X. Hao, H. Liu, K. Ostrikov, J. Ethridge, J. Downes, T. Nann, X. An, M. Phillips, A. Tricoli	Chief Investigator	ARC LIEF Grant - LE200100033	Jan 2020	1 year	$1,200,00
Multi-functional 3D imaging system for micro and nanoscale devices , Q Bao, I Aharonovich, **K Kalantar-zadeh,** W Cheng, Y Lu, J Jasieniak, N Voelcker, M Gu, L Li, MB Holl, T Wu, M Phillips, B Abbey, A Roberts, D Li	Chief Investigator	ARC LIEF Grant - LE190100116	Jan 2019	1 year	$809,000
Facility for electric and magnetic probes of materials at extreme conditions, M. Fuhrer, M. Edmonds, U. Bach, K. Suzuki, J. Karel, **K. Kalantar-zadeh**, L. Wang, V. Bansal, J. Ou, J. Seidel, J. Yi, Y. Lu	Chief Investigator	ARC LIEF Grant - LE180100054	Jan 2018	1 year	$824,080
Facility for exploring light-matter interactions in space, time and energy, M Fuhrer, P Stoddart, E Ostrovskaya, H Hattori, D Neshev, J Davis, **K Kalantar-zadeh**, A Schiffrin, Y Kivshar, V Bansal, S Juodkazis, L Spiccia, U Bach, M Gu	Chief investigator	ARC LIEF Grant - LE170100072	2017	1 year	$600,000
Educational Pathways: Creating a Highly Skilled Meat Industry, R. Hoseinnezhad, A. Bab-Hadiashar, P. Torley, M. Osborn, B.P. Adhikari, E. Blanch, H. Gill, **K. Kalantar-zadeh**	Chief investigator	Australian Meat Processor Corporation Competitive Grant	2016	3 years	$1,050,000

Gas Sensing Capsule, **K. Kalantar-zadeh**, J. Ou	Leader	Acceleration Commercialisation Grant, Department of Business	2016	2 years	$244,000
Advanced Synthesis System for Two-Dimensional Nanomaterials, Y. Chen, L. Li, **K. Kalantar-zadeh**, D. Li, Q. Bao, H. Wang, W. Cheng, J. H. Kim, S. Li, J. Razal, W. Yang, A. Glushenkov	Chief investigator	ARC LIEF Grant - LE160100199		1 year	$367,900
Collaborative Advanced Spectroscopy Facility for Advanced Materials and Devices, S Sriram, P Stoddart, D Abbott, P Mulvaney, M Bilek, Marcela; J Friend, **K Kalantar-zadeh,** B Gibson, V Bansal, S Juodkazis, S Notley, E Ivanova, C Fumeaux, W Withayachumnankul, A Hill, D Dunstan, P Lay, S Palomba	Chief investigator	ARC LIEF Grant - LE150100001	2015	1 year	$410,000
In-situ electron microscopy , J Etheridge, BC Muddle, DG McCulloch, P Mulvaney, PD Hodgson, A Pring, M Bond, D Li, K Suzuki, **K Kalantar-zadeh**	Chief Investigator	ARC LIEF Grant - LE110100223	2011	1 year	$1,000,000
Molecular Spectroscopic 2D and 3D Imaging Systems at Sub Micron Spatial Resolution, PR Stoddart, SL McArthur, D McNaughton, AM Bond, BM Cooke, LL Martin, LY Yeo, S Sriram, G Kostovski, BR Wood, J Beardall, YS Morsi, **K Kalantar-zadeh**, A Mitchell, and CC Berndt	Chief Investigator	ARC LIEF Grant, LE100100215	2010	1 year	$320,000
Hybrid Nanostructured Fuel Cells. The Department of Innovation, Industry, Science and Research - International Science Linkages (ISL) Scheme.	Leader	DEST International Linkage Grant	2009	2 years	$81,000

K Kalantar-zadeh, A Mitchell, W Wlodarski					
Nanostructured Electrochemical Layers. AusAid Leadership Fellowship, **K Kalantar-zadeh,** Z Hu, YX Li	Leader	DWAAR	2009	1 year	$23,000
Nanophotonic and Microfluidic Integration Facility: a Platform for Optofluidics, A Mitchell, **K Kalantar-zadeh**, AS Holland, JG Partridge, G Kostovski, TG Nguyen, PR Stoddart, BJ Eggleton, C Monat, C Grillet, C Karnutsch, G Rosengarten, DN Neshev	Chief Investigator	ARC LIEF Grant, LE0989726	2009	1 year	$250,000
Melbourne Platform for Surface Characterisation of Structured Materials, J Du Plessis, P Mulvaney, DG McCulloch, A Mitchell, AS Holland, **K Kalantar-zadeh**, SK Bhargava, V Bansal, PJ Coloe, RA Shanks, AB Holmes, JE Sader	Chief Investigator	ARC LIEF Grant, LE0989615	2009	1 year	$300,000
Comprehensive Analysis Facility for Thin Films and Surfaces, MM Marie Bilek, CD Ling, PR Munroe, MA Stevens-Kalceff, DP Riley, AS Holland, JF Williams, DR McKenzie, BJ Kennedy, MJ Hoffman, N Valanoor, DG McCulloch, MA Green, CJ Kepert, **K Kalantar-zadeh,** T Maschmeyer, GJ Conibeer, KA Gross, RP Burford, A Mitchell, MW Austin, S Samarin	Chief Investigator	ARC LIEF Grant, LE0882246	2008	1 year	$750,000
Gas Sensors Based on Nanostuctured Thin Films, **K Kalantar-zadeh**, W Wlodarski, A Mitchell, A Holland	Project Leader	DEST International Linkage Grant	2007	2 years	$49,000

The Melbourne Nanofabrication Facility, P Mulvaney, S Prawer, F Caruso, JE Sader, KA Nugent, ST Huntington, DE Dunstan, DG McCulloch, PN Johnston, W Wlodarski, **K Kalantar-zadeh**, AR Wilson, TJ Davis	Chief Investigator	ARC LIEF Grant, LE0775562	2007	1 year	$500,000
Development of Surface Acoustic Wave Biosensors, D Mainwaring, P Coloe, J Fecondo**, K Kalantar-zadeh**	Chief Investigator	Biotechnology Innovation Fund BIF, Aus Industry	2005	1 year	$80,000
Multi-functional fluorescence microscopy laboratory, M W Austin, I Cosic, A Mitchell, K Kalantar-zadeh, DE Dunstan, G Rosengarten, EK Hill, AW Wood	Chief Investigator	ARC LIEF Grant, LE0561157	2004	1 year	$110,000
Philanthropic and Industry sectors, O/seas government bodies					
Spectrometer for vaginal tract, K Kalantar-Zadeh	Project leader	Philanthropic	2025	2 years	$660,000
Carbon capture using liquid metals (commecialisation), Investigators: **K Kalantar-Zadeh,** D. Esrafilzadeh	Project leader	UniSeed	2021	2 years	$600,000
Carbon capture using liquid metals, Investigators: **K Kalantar-Zadeh,** D. Esrafilzadeh	Project leader	Chevron	2020	1 year	$100,000
Development of anaerobic gas sensing systems, Investigator: **K Kalantar-zadeh**	Project Leader	Veolia France	2016	1 year	$52,500
Fabrication of Humidity Electrochemical based Sensors, DSTO, Melbourne, Investigator: **K Kalantar-zadeh**	Project Leader	DSTO	2007	1 year	$10,000
Nanovic MicroArray Patch Incorporating a Switchable Surface, Nanovic, Australia,	Project Leader	Nanovic	2006	1 year	$20,000

Investigator: **K Kalantar-zadeh**					
Peltier coolers integrated in microfluidic systems for biosensing applications, W Wlodarski**, K Kalantar-zadeh,** AS Holland, G Rosengarten	Chief Investigator	CASS science and medicine projects	2003	1 year	$49,000

Appendix I – a brief on some of teaching achievements

I am the recipient of an **award from the Office for Learning and Teaching (OLT), Australia, Citations for Outstanding Contributions to Student Learning, in 2011.**
I have learnt that in order to deliver successful lectures it is important to have a clear understanding of not only what the students want to learn, but also what is happening within the wider research and teaching community. Therefore, I am always in touch with the latest industrial, scientific and educational advances and am constantly making an effort to further my own education by learning new topics, attending professional meetings, taking classes, attending workshops and staying informed about recent advances in industry. Student comments such as, "*the lecturer has an extraordinary ability to interact well with students…"* and, "*Kourosh's class is an enjoyable experience* " (both from Third and Fourth Year Sensors and Actuators cohort, 2014) are abundant in students' formal RMIT and University of Sydney Course Experience Surveys.
The comments from the international community on my teaching textbook were remarkably positive. Reviewers said: "'*Nanotechnology-Enabled Sensors' is a textbook giving the reader an introduction to both sensing and nanotechnology ... .[Its] focus on broadness of topics without confusing the reader with too many details, and the extensive reference lists at the end of all the chapters, make it a highly appreciable introduction to the field of nanotechnology enabled sensing. This book is an excellent tool both for graduate students* (*after bachelor level*) *and scientists wishing to obtain a good, concise overview of both nanotechnology and sensing ...* ." (Peter A. Lieberzeit, Analytical and Bioanalytical Chemistry, Vol. 392, 2008) "*...[It] provides the reader with a deep understanding of the concepts of nanotechnology enabled sensors ... this book provides a good basis for anyone entering or studying the field of nanotechnology enabled sensors. It not only provides a good basis for the inexperienced practitioner but also could be very useful to those with some experience. ... should be very useful for both: researchers as well as final year graduate and post graduate students ...* ." (Sergey Y. Yurish, Sensors & Transducers Journal, Vol. 98, 2008) "*There is currently no textbook that captures the advances in motion during the last decade. The authors have attempted to fill the void with this book.*" (M. Meyyappan, IEEE Nanotech Magazine, December, 2009).
My course materials have always acted as great motivators for undergraduate students to continue into postgraduate courses in relevant fields.

Appendix II – Training and nurturing PhD students and postdoctoral fellows

Haidong Zheng, one of my PhD graduates, has written, "*...through his guidance I have been able to publish more and better quality scientific papers than my peers, securing my future as an emerging researcher...*". To date, I have trained ~60 PhD students (as their first and second supervisors at UNSW, RMIT and USyd) to successful completion. None of my candidates have failed or dropped out which is an exceptional record in Australia. Many graduates are now in senior roles in industry and academia. Out of these students, I have been able to see the success of many national fellows including fifteen ARC Fellows, NHMRC Fellows, VESKI Fellows and one Churchill Fellows. A list of selected past PhD students and former group members awardees since 2012 is as follows:

- 2012 RMIT VC's Doctoral Research Excellence Award, Dr Jerry Yu
- 2012 RMIT VC's Excellence Award for Higher Degree by Research Publication Excellence, Mr Laith Al Mashat
- 2012 RMIT Doctoral Research Excellence Award, College of Science, Engineering and Health, Dr Haidong Zheng
- 2012 Royal Society of Victoria, Young Scientist Research Prize, Dr Sivacarendran Balendhran
- 2013 Australian Research Council (ARC) DECRA Fellowship, Dr. Khashayar Khoshmanesh
- 2013 Victorian Postdoctoral Research Fellowship, Department of Business and Innovation, State Government of Victoria, Dr Jos Campbell
- 2013 RMIT VC's Higher Degree by Research Publication Excellence Prize, Dr Sivacarendran Balendhran
- 2014 RMIT VC's Doctoral Research Excellence Prize, Dr Sumeet Walia
- 2014 RMIT Doctoral Research Excellence Award ,College of Science, Engineering and Health, School of Electrical and Computer Engineering, Dr Adam Chrimes
- 2014 Churchill Fellow, Dr Sivacarendran Balendhran
- 2014 ARC DECRA Fellowship, Dr Sivacarendran Balendhran
- 2015 Victorian Postdoctoral Research Fellowship, Department of Business and Innovation, State Government of Victoria, Dr Adam Chrimes
- 2015 RMIT Vice-Chancellor's Doctoral Research Excellence Prize, Dr. Rozina Abdul Rani
- 2015 RMIT College of Science, College of Science, Engineering and Health, Dr Ahmad Sabirin bin Zoolfakar
- 2016 ARC DECRA Fellowship, Dr. Jian Zhen Ou
- 2017 Victoria Fellowship, Dr. Jian Zhen Ou
- 2018 Victoria Fellowship, Dr. Sumeet Walia
- 2018 Top 10 Young Innovators in the APAC region by the world-renowned MIT Technology review, Dr. Sumeet Walia
- 2019 ARC DECRA Fellowship, Dr. Torben Daeneke
- 2020 ARC DECRA Fellowship, Dr. Md Rahim Arifur
- 2020 ARC DECRA Fellowship, Dr. Priyank Kumar
- 2021 ARC DECRA Fellowship, Dr. Jianbo Tang

- 2022 ARC DECRA Fellowship, Dr. Dorna Esrafilzadeh
- 2023, ARC DECRA Fellowship, Dr. Ali Zavabeti
- 2024, ARC Future Fellowship, Dr Ali Jalili
- 2024, ARC Early Career Industrial Fellow, Zhenbang Cai