Research Leadership

Dr. Michael Nolan

Principal Scientist, Tyndall National Institute, UCC
Professor of NanoMaterials Modeling, NIBEC, Ulster University, UK

Michael.Nolan@Tyndall.ie
@mick__geek
https://www.linkedin.com/in/nolanmichael2/

Career Pathways

BSc. Chemistry & German, Dublin City University, 1997

Two Semesters University of Leipzig, Germany (1995-96)

Pivot - apply knowledge of chemistry and materials for problems in engineering

MEngSc Electronic Engineering, NMRC, UCC 1999

Modelling and predicting thermal behaviour of new polymers

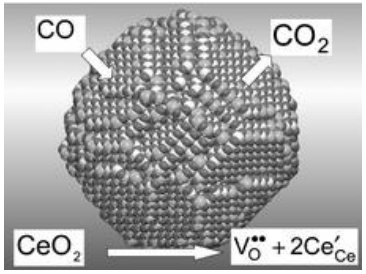
PhD Microelectronic Engineering, NMRC, UCC 2004

Investigate properties of super miniature electronic devices

Career Pathways

- 2003 – 05 Postdoc School of Chemistry, Trinity College Dublin
- Modelling to find materials that remove pollutants in car exhausts

Pivot – apply knowledge of chemistry and materials for problems in energy



- Two IRC postdoc applications – fell down on mobility!
- 2005 – 09 Postdoc at Tyndall

WP lead on two EU projects.

Develop network and ideas for independence

- Permanent @Tyndall 2009

1st SFI grant (SIRG) October 2009 – 1st PhD student, 4th year project

Co-PI on EU FP7 January 2010

Grow responsibilities/committees/teaching

Career Pathways

- Promotion Senior Staff (Principal Scientist) 2015

Tyndall PI on EU FP7 project 2014 - first postdoc

Coordinator of SFI US-Ireland project 2014

Industry collaborations

T & L Certificate 2017

- Take over leadership of group after group head departure 2018

Coordinator of 2 SFI-funded partnerships

PI on Marie Curie Training Network

Direct industry funding

Enterprise Ireland funding

Senior committee/service roles

Evaluator for proposals

Conference organisation

Outputs

Michael Nolan

FOLLOWING

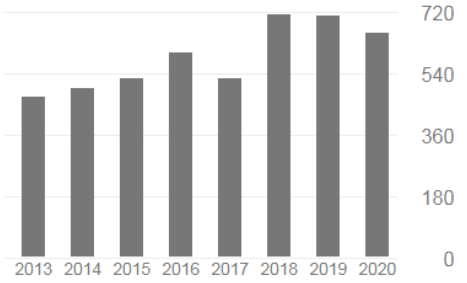
Tyndall National Institute, University College Cork, Ireland
Verified email at tyndall.ie - Homepage

catalysis photocatalysis computational chemistry metal oxides atomic layer deposition

TITLE	CITED BY	YEAR
Density functional theory studies of the structure and electronic structure of pure and defective low index surfaces of ceria M Nolan, S Grigoleit, DC Sayle, SC Parker, GW Watson Surface Science 576 (1-3), 217-229	626	2005
The electronic structure of oxygen vacancy defects at the low index surfaces of ceria M Nolan, SC Parker, GW Watson Surface Science 595 (1-3), 223-232	615	2005

Cited by VIEW ALL

	All	Since 2015
Citations	6314	3728
h-index	42	34
i10-index	94	87



Make your Scholar/Publons/… profile!

Preprint your papers – UCC CORA repository – look for Platinum/Diamond Open Access

Funding

- Diversity of Funding

Science Foundation Ireland

SFI Starting Investigator 2009 – 2013. Value €368k

SFI US-Ireland (Ulster, Northwestern) 2014 – 2018. Value €298k

SFI M-ERA.net H2020 co-fund (TU Delft, CSIC Sevilla, CIEMAT) 2017 – 2020. Value €249k

SFI-NSF China Partnership (Fudan) 2018 – 2021. Value €760k

SFI Frontiers of the Future (Tyndall co-PI) 2020 – 2024. Value € 498k

SFI-EPSRC Partnership (IT Sligo, Glasgow, Herriott-Watt) 2020 – 2024. Value €230k

European Union Framework

ICT-FET-Proactive (SiNAPS, coordinator) 2010 – 2013. Value € 880k

FP7-NMP-2013 (BIOGO) 2013 – 2017. Value € 440k

H2020-MSCA-ITN (HYCOAT) 2018 – 2021. Value €400k

Funding

- Diversity of Funding

Enterprise Ireland (Innovation Partnerships)

EI IPP Medical Devices, Lead PI. 2019 – 2021. Value €365k

EI IPP Semiconductors, Modelling PI. 2019 – 2021. Value €450k

Industry Funding

Intel Components & Research, Lead PI. 2018 – 2020. Value €60k

LAM Research, Lead PI 2014 – 2019. Value € 250k

Semiconductor Company, PI. 2020. Value €46k

Outreach and Public Engagement

SFI Discover Program (IPCI, School of Looking, Crawford Gallery). 2020. Value €50k

People

- Most important part of being research leader

PhDs

Dr. Anna Iwaszuk, 2014

Dr. Merid Legesse, 2014

Dr. Drahomir Chovan, 2014

Dr. Ekaterina Filatova, 2019

Currently
5 PhDs + 1 recruited
4 Postdocs
2 FYPs

Postdocs

Dr. John Carey 2014 - 17

Dr. Marco Fronzi 2014 - 16

Dr. Julio Guttierez 2016 - 2018

Dr. Suresh Natarajan 2017 - 2019

Dr. Ji Liu 2019 -

Dr. Mohammad Noor Alam 2018 -

Dr. Zahra Ghaferi 2019 -

Dr. Barbara Maccioni 2019 -

Service

- Manager of Tyndall High Performance Computing Facility
- Irish Centre for High-End Computing (ICHEC): User's Council member (2008 – 2012), co-chair (2019 -), Science Council (2015 -)

- Various committees in Tyndall and UCC (Access, Athena Swan, Internal Conference, Outreach, etc)

- Proposal reviewer for funding agencies
- Panel reviewer
- Journal reviewer – reach out to be considered as reviewer
- Program Committee, e.g. EMRS, ALD2020

Continuous Development

- Online profile: Google Scholar, Publons, ORCID, ResearchGate, UCC IRIS, Wordpress-based website, LinkedIn
- Keep your CV updated – Google Docs / One Drive – keep URL to hand
- Social Media: Twitter (@mick__geek), LinkedIn
- Technical Training – summer schools, online courses
- Generic Skills – PDRS: what do you need to be successful and move your career forwards.
- Postdoc Hub / Digital Badges
- HR supports – HRS4R is there to improve your experience

Advice

- Find an area where YOU can be THE acknowledged expert
- Read, read, read literature – keep abreast of more than one area

- Build a network
- Approach people (what's the worst they can say?)
  - Have a good, snappy story – academic elevator pitch
  - Convince people YOU are THE person to work with on this topic
  - Make things happen

- Lead proposals

- Find a mentor – technical and (a different) non-technical

- Do not let problems/difficulties mount up

- Ambition – aim high – if you do not try, it will not happen

Advice

- Accept critical feedback – it is generally well meant and helpful.
- You cannot know EVERYTHING by yourself. Ask for advice, improve your technical and non-technical skills
- Teamwork ever more important. Mutual Respect & Trust. Integrity
- Expect to not work in academia – but many industries do awesome research with more resources
- Network – build a collaborative network
- Identify THE conference where you want to be the plenary/keynote and work towards that
- Be nice, be kind, ask respectfully, listen, tell your story

Look for Solutions, not problems
- Common ground first
- Then differences

It is cool to make mistakes!
- But you have to learn from them

Acknowledge good work done
- But be honest with feedback

Perfect is the enemy of good
- Deliver good enough and on time

Embrace diversity and differences

Understand the difference between Management (Operational) and Leadership