

Boon Siang Jason YEO

Contact Information

Address Department of Chemistry
National University of Singapore
S8-02-05D
Singapore 117543

Tel. No.: 65-65162836 (office)

Email: chmyeos@nus.edu.sg

Webpage: https://www.chemistry.nus.edu.sg/people/academic_staff/yeobsj.htm

ORCID: 0000-0003-1609-0867
Researcher ID: C-6487-2014

Employment

April 2012 – Present Assistant Professor in the Department of Chemistry, National University of Singapore
Group Leader of the Solar Fuels Lab in the Solar Energy Research Institute of Singapore (SERIS)

Professional Training

Feb 2009 – Jan 2012 Chemist Postdoctoral Fellow in the Lawrence Berkeley National Laboratory and University of California, Berkeley

Jan 2005 – Jan 2009 Dr. Sc. in Chemistry, ETH Zürich

Jul 2001 – Jul 2004 M.Sc. in Chemistry, National University of Singapore
Gold Medal for the Most Outstanding M.Sc. Thesis in Chemistry

Jul 1997 – Jun 2001 B.Sc. with Honors (First Class) in Chemistry
National University of Singapore

Awards and Honors

1. Faculty Honours Roll (Teaching) for AY **2016/2017**, National University of Singapore
2. Faculty Teaching Excellence Award for AY **2015/2016**, National University of Singapore
3. Annual Teaching Excellence Award for AY **2014/2015**, National University of Singapore
4. Faculty Teaching Excellence Award for AY **2014/2015**, National University of Singapore
5. Faculty Teaching Excellence Award for AY **2013/2014**, National University of Singapore
6. Travel Grant, **2008**. Huber Kudlich Foundation, Switzerland.
7. Travel Grant, **2008**. Division of Analytical Chemistry of the Swiss Chemical Society.
8. Gold Medal for the Most Outstanding M.Sc. Thesis in Chemistry, **2005**. Singapore National Institute of Chemistry.
9. President's Graduate Fellowship, **2002-2003**. National University of Singapore.
10. Research scholarship, **2001-2003**. National University of Singapore.
11. Faculty of Science Dean's List in Semester 2, **1998-1999** for meritorious performance. National University of Singapore.
12. Book Prize for Best Undergraduate in Level 2 Chemistry, **1999**. Singapore National Institute of Chemistry.

Grants

1. Green Fuels Program, NUS (Involvement: PI; with 4 other PIs) - 1.4 million SGD (**Mar 2018 - Mar 2021**)
2. NRF Intra-CREATE CARES-BEARS (Involvement: PI; with 9 other PIs) (A table top chemical factory for the reduction of CO₂ to value added chemicals) - 4,999,532 SGD (**Jan 2018-Dec 2020**)
3. FRC Tier 1 (Involvement: PI) (Development of tandem catalysts for the efficient adsorption and electroreduction of carbon dioxide to high value products) - 78,000 SGD (**July 2017-July 2018**)
4. MOE Tier II (Involvement: PI) (C-C Coupling Electrocatalysts for Reducing CO₂ to n-Propanol and n-Butanol) - 366,047 SGD (**June 2017-May 2020**)
5. Solar Energy Research Institute of Singapore (Involvement: PI) Establish Solar Fuels Lab, 350,000 SGD, 2 RA positions for 4 years (**Dec 2015 - Present**)
6. FRC Tier 1 (Involvement: PI) (Developing Non-noble Transition Metal Carbides and Nitrides for Hydrogen Evolution) - 179,000 SGD. (**Oct 2015-Sept 2018**)
7. NRF CREATE SINBERISE (Involvement: PI; with 6 other PIs) 3,353,302 SGD (**Mar 2013-Mar 2018**)
8. FRC Tier 1 (Involvement: PI) (Understanding Structure-Activity and Structure-Selectivity Relationships for Electrochemical Energy Conversion Reactions by Operando X-Ray Spectroscopy) - 171,000 SGD. (**Aug 2014-Aug 2017**)
9. Collaboration with Practical Analyzer Solutions Pte Ltd (PAS), Prototype Development Project (Involvement: PI) (High Pressure Electrochemical Cell Body) - Contribution of 12,000 SGD by PAS (**Jan 2016-Jul 2016**)
10. NUS Start-up grant (Involvement: PI) (Understanding and Developing Catalytic Materials for Energy Conversion Reactions: Electrochemical Reduction of Carbon Dioxide to Transportation Fuels) - 773,838 SGD. (**Jun 2012-Jun 2015**)

Peer-Reviewed Publications

h-index = 23

According to WoS, Publications # 14, 20, 22, 25, 26, 28 30 and 33 currently received enough citations to be placed in the top 1% of the academic field of Chemistry based on a highly cited threshold for the field and publication year.

In NUS

1. S.S. Pramana, A. Cavallaro, C. Li, A.D. Handoko, K.W. Chan, R.J. Walker, A. Regoutz, J.S. Herrin, B.S. Yeo, D.J. Payne, J.A. Kilner, M.P. Ryan and S.J. Skinner. Crystal structure and surface characteristics of Sr-doped GdBaCo₂O_{6-δ} double perovskites: oxygen evolution reaction and conductivity *J. Mater Chem. A* 6, 5335. **2018**.
2. D. Ren, J. Fong and B.S. Yeo. The effects of currents and potentials on the selectivities of copper toward carbon dioxide electroreduction. *Nature Comm.* 9, 925. **2018**.
3. L. Mandal, K.R. Yang, M.R. Motapothula, D. Ren, P. Lobaccaro, A. Patra, M. Sherburne, V.S. Batista, B.S. Yeo, J.W. Ager, J. Martin, and T. Venkatesan. Investigating the Role of Copper Oxide in Electrochemical CO₂ Reduction in Real Time. *ACS Appl. Mater. Interfaces*. 10, 8574-8584. **2018**
4. U. Joshi, S. Malkhandi, Y. Ren, T.L. Tan, S.Y. Chiam and B.S. Yeo. Ruthenium-Tungsten Composite Catalyst for the Efficient and Contamination-Resistant Electrochemical Evolution of Hydrogen. *ACS Appl. Mater. Interfaces*. 10, 6354-6360. **2018**.
5. Y. Huang, Y. Deng, A.D. Handoko, G.K.L. Goh and B.S. Yeo. Rational Design of Sulfur-Doped Copper Catalysts for the Selective Electroreduction of Carbon Dioxide to Formate. *ChemSusChem*. 11, 320-326. **2018**

6. L. Gong, X.Y.E. Chng, Y.H. Du, S.B. Xi and B.S. Yeo. Enhanced Catalysis of the Electrochemical Oxygen Evolution Reaction by Amorphous Cobalt Oxide / Adsorbed Iron(III) Ions. *ACS Catal.* 8, 807-814. **2018**
7. J.E. Pander III, D. Ren, Y. Huang, N.W.X. Loo, S.H.L. Hong and B.S. Yeo. Understanding the Heterogeneous Electrocatalytic Reduction of Carbon Dioxide on Oxide-Derived Catalysts. *ChemElectroChem.* 5, 219-237. **2018 (Invited)**.
8. J.E. Pander III, D. Ren and B.S. Yeo. Practices for the collection and reporting of electrocatalytic performance and mechanistic information for the CO₂ reduction reaction. *Catal. Sci. Tech.* 7, 5820-5832. **2017. (Invited)**.
9. Y. Deng and B.S. Yeo. Characterization of Electrocatalytic Water Splitting and CO₂ Reduction Reactions Using In Situ/Operando Raman Spectroscopy. *ACS Catal.* 7, 7873-7889. **2017. (Invited)**.
10. D. Ren, N.W.X. Loo, L. Gong, B.S. Yeo. Continuous Production of Ethylene from Carbon Dioxide and Water Using Intermittent Sunlight. *ACS Sustainable Chem. Eng.* 5, 9191-9199. **2017**.
11. A.D. Handoko, K.W. Chan and B.S. Yeo. -CH₃ Mediated Pathway for the Electroreduction of CO₂ to Ethane and Ethanol on Thick Oxide-Derived Copper Catalysts at Low Overpotentials. *ACS Energy Lett.* 2, 2103-2109. **2017**.
12. U. Joshi, S. Malkhandi and B.S. Yeo. Investigating synergistic interactions of group 4, 5 and 6 metals with gold nanoparticles for the catalysis of the electrochemical hydrogen evolution reaction. *Phys. Chem. Chem. Phys.* 19, 20861. **2017**.
13. Z. Chen, K. Leng, X. Zhao, S. Malkhandi, W. Tang, B. Tian, L. Dong, L. Zheng, M. Lin, B.S. Yeo and K.P. Loh. Interface Confined Hydrogen Evolution Reaction in Zero Valent Metal Nanoparticles-Intercalated Molybdenum Sulfide. *Nature Comm.* 14548. **2017**.
14. Y. Huang, A.D. Handoko, P. Hirunsit and B.S. Yeo. Electrochemical Reduction of CO₂ Using Copper Single-Crystal Surfaces: Effects of CO* Coverage on the Selective Formation of Ethylene. *ACS Catal.* 7, 1749-1756. **2017**.
15. D. Ren, B.S.H. Ang and B.S. Yeo. Tuning the Selectivity of Carbon Dioxide Electroreduction toward Ethanol on Oxide-Derived Cu_xZn Catalysts. *ACS Catal.* 6, 8239. **2016**.
16. Y.L. Deng, L.R.L. Ting, P.H.L. Neo, Y.J. Zhang, A.A. Peterson, and B.S. Yeo. Operando Raman Spectroscopy of Amorphous Molybdenum Sulfide (MoS_x) during the Electrochemical Hydrogen Evolution Reaction: Identification of Sulfur Atoms as Catalytically Active Sites for H⁺ Reduction. *ACS Catal.* 6, 7790. **2016**.
17. A.D. Handoko, C.W. Ong, Y. Huang, Z.G. Lee, L. Lin, G.B. Panetti, and B.S. Yeo. Mechanistic Insights into the Selective Electroreduction of Carbon Dioxide to Ethylene on Cu₂O-Derived Copper Catalysts. *J. Phy. Chem. C.* 120, 20058. **2016**.
18. U. Joshi, J. Lee, C. Giordano, S. Malkhandi and B.S. Yeo. Enhanced Catalysis of the Electrochemical Hydrogen Evolution Reaction using Composites of Molybdenum-Based Compounds, Gold Nanoparticles and Carbon. *Phys. Chem. Chem. Phys.* 18, 21548. **2016**.
19. L. Gong, D. Ren, Y.L. Deng and B.S. Yeo. Efficient and Stable Evolution of Oxygen Using Pulse-Electrodeposited Ir/Ni Oxide Catalyst in Fe-Spiked KOH Electrolyte. *ACS Appl. Mater. Interfaces.* 8, 15985. **2016**.
20. Y.L. Deng, A.D. Handoko, Y.H. Du, S.B. Xi and B.S. Yeo. In Situ Raman Spectroscopy of Copper and Copper Oxide Surfaces during Electrochemical Oxygen Evolution Reaction: Identification of

Cu^{III} Oxides as Catalytically Active Species. *ACS Catal.* 6, 2473. **2016.** (*Featured in the ACS select virtual issue 'The Way Forward in Molecular Electrocatalysis', 2016*)

21. D. Ren, N.T. Wong, A.D. Handoko, Y. Huang and B.S. Yeo. Mechanistic Insights into the Enhanced Activity and Stability of Agglomerated Cu Nanocrystals for the Electrochemical Reduction of Carbon Dioxide to n-Propanol. *J. Phy. Chem. Lett.* 7, 20. **2016.**
22. L.R.L. Ting, Y.L. Deng, L. Ma, Y.J. Zhang, A.A. Peterson, and B.S. Yeo. Catalytic Activities of Sulfur Atoms in Amorphous Molybdenum Sulfide for the Electrochemical Hydrogen Evolution Reaction. *ACS Catal.* 6, 861. **2016.**
23. A.D. Handoko, S. Deng, Y. Deng, A.W.F. Cheng, K.W. Chan, Y. Pan, H.R. Tan, E.S. Tok, C.S. Sow and B.S. Yeo, Enhanced Activity of H₂O₂-treated Copper (II) Oxide Nanostructures during the Electrochemical Evolution of Oxygen. *Catal. Sci. Technol.* 6, 269. **2016.**
24. C.S. Chen, J.H. Wan and B.S. Yeo. Electrochemical Reduction of Carbon Dioxide to Ethane using Nanostructured Cu₂O-Derived Copper Catalyst and Palladium (II) Chloride. *J. Phy. Chem. C.* 119, 26875. **2015.**
25. D. Ren, Y. Deng, A.D. Handoko, C.S. Chen, S. Malkhandi and B.S. Yeo. Selective Electrochemical Reduction of Carbon Dioxide to Ethylene and Ethanol on Copper (I) Oxide Catalysts. *ACS Catal.* 5, 2814. **2015.**
26. L. Ma, L.R.L. Ting, V. Molinari, C. Giordano and B.S. Yeo. Efficient hydrogen evolution reaction catalyzed by molybdenum carbide and molybdenum nitride nanocatalysts synthesized via the urea glass route. *J. Mat. Chem. A.* 3, 8361. **2015.**
27. D. Ren, Y. Huang and B.S. Yeo. Electrocatalysts for the Selective Reduction of Carbon Dioxide to Useful Products. *Chimia.* 69, 131. **2015.** (*Invited*).
28. C.S. Chen, A.D. Handoko, J.H. Wan, L. Ma, D. Ren and B.S. Yeo. Stable and Selective Electrochemical Reduction of Carbon Dioxide to Ethylene on Copper Mesocrystals. *Catal. Sci. Technol.* 5, 161. **2015**

Before NUS

29. D. Friebel, M. Bajdich, B.S. Yeo, M.W. Louie, D.J. Miller, H.S. Casalongue, F. Mbuga, T.C. Weng, D. Nordlund, D. Sokaras, R. Alonso-Mori, A.T. Bell and A. Nilsson. On the chemical state of Co oxide electrocatalysts during alkaline water splitting. *Phys. Chem. Chem. Phys.* 15, 17460. **2013.**
30. B.S. Yeo and A.T. Bell. In Situ Raman Study of Nickel Oxide and Gold-Supported Nickel Oxide Catalysts for the Electrochemical Evolution of Oxygen. *J. Phys. Chem. C.* 116, 94720. **2012.**
31. F. Somodi, S. Werner, Z.M. Peng, A.B. Getsoian, A.N. Milnar, B.S. Yeo and A.T. Bell. Size and Composition Control of Pt-In Nanoparticles Prepared by Seed-Mediated Growth Using Bimetallic Seeds. *Langmuir.* 28, 3345. **2012.**
32. H.K. Carlson, A.T. Iavarone, A. Gorur, B.S. Yeo, R. Tran, R.A. Melnyk, R.A. Mathies, M. Auer and J.D. Coates. Surface multiheme c-type cytochromes from *Thermincola potens* and implications for respiratory metal reduction by Gram-positive bacteria. *Proc. Natl. Acad. Sci. USA.* 109, 1702. **2012.**
33. B.S. Yeo and A.T. Bell. Enhanced Activity of Gold-Supported Cobalt Oxide for the Electrochemical Evolution of Oxygen. *J. Am. Chem. Soc.* 133, 5587. **2011.**

34. B.S. Yeo, S.L. Klaus, P.N. Ross, R.A. Mathies and A.T. Bell. Identification of Hydroperoxy Species as Reaction Intermediates in the Electrochemical Evolution of Oxygen on Gold. *ChemPhysChem*. 11, 1854. **2010**.
35. T. Schmid, B.S. Yeo, G. Leong, J. Stadler and R. Zenobi. Performing Tip-Enhanced Raman Spectroscopy in Liquids. *J. Raman Spectrosc.* 40, 1392. **2009**.
36. B.S. Yeo, E. Amstad, T. Schmid, J. Stadler and R. Zenobi. Investigating the Surface of a Polymer Blend Thin Film with Tip-Enhanced Raman Spectroscopy. *Small*, 5, 952. **2009**.
37. B.S. Yeo, J. Stadler, T. Schmid, R. Zenobi and W.H. Zhang. Tip-Enhanced Raman Spectroscopy – Its Status, Challenges and Future Directions. *Chem. Phys. Lett.* 472, 1. **2009**. (Cover) (**Invited**).
38. T. Schmid, A. Messmer, B.S. Yeo, W.H. Zhang and R. Zenobi. Towards Chemical Analysis of Nanostructures in Biofilms II: Tip-Enhanced Raman Spectroscopy of Alginates. *Anal. Bioanal. Chem.*, 391, 1907. **2008**. (Cover).
39. T. Schmid, J. Burkhard, B.S. Yeo, W.H. Zhang and R. Zenobi. Towards Chemical Analysis of Nanostructures in Biofilms I: Imaging of Biological Nanostructures. *Anal. Bioanal. Chem.*, 391, 1899. **2008**. (Cover).
40. B.S. Yeo, T. Schmid, W.H. Zhang and R. Zenobi. A Strategy to Prevent Signal Losses, Analyte Decomposition and Fluctuating Carbon Contamination Bands in Surface-Enhanced Raman Spectroscopy. *Appl. Spectrosc.*, 62, 708. **2008**.
41. B.S. Yeo, S. Madler, T. Schmid, W.H. Zhang and R. Zenobi. Tip-Enhanced Raman Spectroscopy Can See More: The Case of Cytochrome c. *J. Phys. Chem. C*, 112, 4867. **2008**.
42. W.H. Zhang, T. Schmid, B.S. Yeo and R. Zenobi. Near-Field Heating, Annealing and Signal Loss in Tip-Enhanced Raman Spectroscopy. *J. Phys. Chem. C*, 112, 2104. **2008**.
43. W.H. Zhang, T. Schmid, B.S. Yeo and R. Zenobi. Tip-Enhanced Raman Spectroscopy Reveals Rich Nanoscale Adsorption Chemistry of 2-Mercaptopyridine on Ag. *Israel J. Chem.*, 47, 177. **2007**. (**Invited**).
44. W.H. Zhang, X.D. Cui, B.S. Yeo, T. Schmid, C. Hafner and R. Zenobi. Nanoscale Roughness on Metal Surfaces Can Increase Tip-Enhanced Raman Scattering by an Order of Magnitude. *Nano Lett.*, 7, 1401. **2007**. (**Featured in the analytical currents section of Anal. Chem. 79, 4742. 2007**).
45. X.D. Cui, W.H. Zhang, B.S. Yeo, R. Zenobi, C. Hafner and D. Erni. Tuning the Resonance Frequency of Ag-Coated Dielectric Tips. *Opt. Express*, 15, 8309. **2007**.
46. B.S. Yeo, T. Schmid, W.H. Zhang and R. Zenobi. Towards Rapid Nanoscale Chemical Analysis Using Tip-Enhanced Raman Spectroscopy with Ag-Coated Dielectric Tips. *Anal. Bioanal. Chem.*, 387, 2655. **2007**.
47. W.H. Zhang, B.S. Yeo, T. Schmid and R. Zenobi. Single Molecule Tip-Enhanced Raman Spectroscopy with Silver Tips. *J. Phys. Chem. C*, 111, 1733. **2007**.

(First report of single molecule detection with TERS; one of the most downloaded articles in Jan-Mar 2007 of the journal; featured in TRAC-Trend. Anal. Chem. 26 (3), iv. 2007).
48. T. Schmid, T.A. Schmitz, P.D. Setz, B.S. Yeo, W.H. Zhang and R. Zenobi. Methods for Molecular Nanoanalysis. *Chimia*, 60, A783. **2006**.

49. B.S. Yeo, W.H. Zhang, C. Vannier and R. Zenobi. Enhancement of Raman Signals with Silver-Coated Tips. *Appl. Spectrosc.*, 60, 1142. **2006**.
50. C. Vannier, B.S. Yeo, J. Melanson and R. Zenobi. Multifunctional Microscope for Far-Field and Tip-Enhanced Raman Spectroscopy. *Rev. Sci. Instrum.*, 77, 023104. **2006**.
51. B.S. Yeo, Z.H. Chen and W.S. Sim. Efficient Growth of Ordered Thin Oxide Films on Ni(111) by NO₂ Oxidation. *Surf. Sci.*, 557 (1-3), 201. **2004**.
52. B.S. Yeo, Z.H. Chen and W.S. Sim. Surface Functionalization of Ni(111) with Acrylate Monolayers. *Langmuir*, 19, 2787. **2003**.
53. W.S. Sim, T.C. Li, P.X. Yang and B.S. Yeo. Isolation and Identification of Surface-Bound Acetone Enolate on Ni(111). *J. Am. Chem. Soc.*, 124, 4970. **2002**.

Book Chapters

1. H.M. Jeong, B.S. Yeo and Y.K. Kwon. Copper Catalysts for the Electrochemical Reduction of Carbon Dioxide. In *Energy and Environment Series No. 21. Electrochemical Reduction of Carbon Dioxide: Overcoming the Limitations of Photosynthesis*. Eds: F. Marken and D. Fermin. The Royal Society of Chemistry. **In Press. 2018**.
2. B.S. Yeo, T. Schmid, W.H. Zhang and R. Zenobi. Spectroscopic Imaging with Nanometer Resolution using Near-Field Methods. In *Infrared and Raman Spectroscopic Imaging*. Eds.: R. Salzer and H.W. Siesler. Wiley-VCH, Weinheim. **2009**.
3. T. Schmid, B.S. Yeo, W.H. Zhang and R. Zenobi. Use of Tip-Enhanced Vibrational Spectroscopy for Analytical Applications in Chemistry, Biology, and Materials Science. In *Advances in Nano-Optics and Nano-Photonics*. Eds.: S. Kawata and V.M. Shalaev. Elsevier, Amsterdam. **2007**.

Invited Oral Presentations

Leiden University – **Feb 2018**

Leibniz Institute for Catalysis, Germany (Keynote) – **Dec 2017**

ETH Zurich – **Dec 2017**

232nd Electrochemical Society Meeting – **Oct 2017**

231st Electrochemical Society Meeting – **Jun 2017**

253rd American Chemical Society National Meeting and Exposition – **Apr 2017**

3rd International Conference on Molecular & Functional Catalysis (ICFMC-3) – **Feb 2017**

Materials Challenges in Alternative and Renewable Energy 2017 (MCARE 2017) – **Feb 2017**

QAFCO-Texas A&M at Qatar Chemistry Conference – **Jan 2017**

XIVth International Conference on Electrified Interfaces- **July 2016**

GSS Summer School Solvation Science (University of Bochum) – **May 2016**

228th Electrochemical Society Meeting – **Oct 2015**

247th American Chemical Society National Meeting and Exposition – **Mar 2014**

Lawrence Livermore National Laboratory – **May 2011**

Memberships

The Electrochemical Society, Singapore Chapter
 Singapore Catalysis Society
 The Electrochemical Society
 Materials Research Society
 American Chemical Society

Founding member and Secretary (Since **2017**)
 Elected Member of Executive Committee (Since **2017**)
 Member
 Member
 Member

Service to the Scientific Community

1. Co-Organizer of the 9th Singapore Catalysis Society Annual Forum (**May 2018**)
2. Co-Chair of Symposium No. 7. The 10th Singapore International Chemistry Conference (SICC 10, **16-19 Dec 2018**)
3. Guest Editor (with Andrew A. Peterson) of a Special Issue in *Catalysis Today* (**June 2017**) on 'Electrochemical reduction of carbon dioxide by heterogeneous and homogeneous catalysis: experiment and theory'.
4. Member of the Organizing Committee of the 1st Singapore ECS International Symposium on Energy Materials (**Dec 2017**)

Media reports

A green way to produce ethylene (Nov 2017)

- The Straits Times (<http://www.straitstimes.com/singapore/cleaning-up-the-plastic-making-process>) 24 November 2017
- NUS News (<http://news.nus.edu.sg/press-releases/green-ethylene-production>) 24 November 2017
- Chemical Engineering Magazine (<http://www.chemengonline.com/making-ethylene-artificial-photosynthesis/>) 1 Jan 2018
- Phys.Org (<https://phys.org/news/2017-11-scientists-artificial-photosynthesis-device-greener.html>) 24 November 2017
- The Engineer (<https://www.theengineer.co.uk/photosynthesis-ethylene/>) 24 November 2017
- Science Daily (<https://www.sciencedaily.com/releases/2017/11/171124084755.htm>) 24 November 2017
- Tech Explorist (<https://www.techexplorist.com/artificial-photosynthesis-device-produce-ethylene-gas/>) 24 November 2017

Copper catalyst for reducing carbon dioxide to propanol (Sept 2016)

- NUS News. <https://news.nus.edu.sg/highlights/10904-copper-catalyst-green-energy> 27 Sept 2016.

Single molecule Tip-enhanced Raman Spectroscopy (Jan 2007)

- Fingerabdruck von einzelnen Molekülen (Fingerprint from a single molecule). Neue Zürcher Zeitung. <http://www.nzz.ch/2007/01/31/ft/articleEV32S.html> 6 Feb 2007.
- A Breakthrough in Chemical Analysis. ETH Life. <http://archiv.ethlife.ethz.ch/e/articles/sciencelife/Raman.html> 25 Jan 2007.

Reviews

Grant agencies

Netherlands Organisation for Scientific Research, NWO
Icelandic Research Fund
LEaDing Fellows programme
Agence Nationale de la Recherche (France)
American Chemical Society: The Petroleum Research Fund
Swiss National Science Foundation
Austrian Science Fund (FWF)
Cy-Tera and Eastern Mediterranean Joint Call for Proposals for HPC access
URC, NUS

Journals

Nature
Science
Journal of the American Chemical Society
Nano Letters
Nature Communications
Angewandte Chemie
ACS Catalysis
Journal of Physical Chemistry Letters

Journal of Materials Chemistry A
Chemical Science
Small
ACS Applied Materials and Interfaces
ChemSusChem
Analytical Chemistry
Chemical Communications
ACS Sustainable Chemistry and Engineering
Chemistry – A European Journal
ChemCatChem
Electrochimica Acta
Journal of Physical Chemistry C
Electrochemistry Communications
Journal of CO₂ Utilization
Applied Surface Science
Advanced Materials Interfaces
RSC Advances
ChemPhysChem
Journal of Saudi Chemical Society
Energy Technology
Journal of Catalysis
Journal of Solid State Chemistry
Green Chemistry Letter and Reviews
Current Opinion in Electrochemistry
Review of Scientific Instruments
Catalysis Today
Applied Catalysis A
Zeitschrift für Anorganische und Allgemeine Chemie
Chinese Journal of Catalysis
Nature Catalysis
ACS Applied Energy Materials
ACS Energy Letters
Advanced Materials Technologies

Lab Information

Currently in the Lab

1 postdoctoral chemist, 7 PhD students, 1 Research Assistant and 4 undergraduate students

Postgraduate Students Trained to Date

Dr. Ren Dan (Ph.D. Dec 2017)

Dr. Deng Yilin (Ph.D. Aug 2017)

Teaching

Topics in Environmental Chemistry (CM5244) - **AY2013/2014; AY2014/2015; AY2015/2016; AY2016/2017; AY2017/2018**

Instrumental Analysis II (CM3242) - **AY2017/2018**

Analytical Chemistry I (CM2142) – **AY2013/2014; AY2014/2015; AY2015/2016; AY2016/2017**

Environmental Chemistry (CM 3261) - **AY2014/2015**

Outreach and other activities

Outreach

Speaker to students in the CHIJ Katong	24 May 2017
FoS Open House. Speaker for the Chemistry Master Class	13 May 2017
Speaker to SRP Students (On research methods)	12 April 2017
Speaker to students in the Methodist Girls School	14 April 2017
Speaker for the Dialogue in Chemistry Education, NUS	15 November 2016
Speaker for the One-North Festival. A*STAR	5 August 2016
Speaker for the NUS Chemistry research & training workshop for Malaysia Chinese high school teachers	23-26 May 2016
FoS Open House. Speaker for the Chemistry Master Class	23 May 2015
Speaker to NUS High School students	25 Sept 2013

Examiner / Assessor

Assessor for the Singapore Science and Engineering fair (SSEF)	Jan-Mar 2018
Examiner for SRP-H3 exams	2013, 2016, 2017 and 2018
Panel judge - ICAAS-WSPS Most Outstanding Junior College Science Student Award	Sept 2017
FoS Assessor for Outstanding Undergraduate Research Program (OURP)	24 April 2015
FoS Assessor for students applying to NUS under Discretion Admission	May 2014
FoS Assessor for Outstanding Undergraduate Research Program (OURP)	25 April 2014

Fund-raising

Member of the fund raising committee (with the industries) for the NUS Department of Chemistry 88th Anniversary Dinner (**Mar-Oct 2017**)

Student recruitment

Department evaluator for applicants to the M.Sc. Chemistry for Energy and Environment.	March 2017
Committee member to establish the new M.Sc. Chemistry for Energy and Environment program in the NUS	2016/2017
Interviewer for the graduate programmes admission, Dept of Chemistry, NUS	1-3 March 2013
Speaker to ACJC students for promoting the department of chemistry, NUS.	20 Feb 2013
Speaker for the graduate roadshow in China to promote the department of chemistry, NUS.	23-27 Oct 2012

From **2009-2011**, I also mentored high school students participating in the CAL Forum held in the San Francisco Bay Area. This program aims to help young men to discover a professional mission in life that is best adapted to their individual talents and that will have a significant positive impact on society.