

## STEPHEN TAY (Dr)

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*PhD (Materials) Imperial College London, B.Eng. (Materials Engineering, First Class Honours) Nanyang Technological University*



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### **CURRICULUM VITAE**

#### **ACADEMIC QUALIFICATIONS:**

- PhD in Materials, Imperial College London (2015)
  - National Research Foundation (Clean Energy) Overseas Scholarship
- B.Eng. in Materials Engineering (First Class Honours), Nanyang Technological University (2011)
  - Dean's List for 2009/2010 and 2010/2011
  - A\*STAR Pre-Graduate Scholarship for 2010/2011

#### **EMPLOYMENT RECORDS:**

- Senior Lecturer in Department of Building, NUS (2018 – Present)
- Head of Urban Solar Group and National Solarisation Centre, Solar Energy Research Institute of Singapore, NUS (2017 – 2018)
- Head of National Solarisation Centre, Solar Energy Research Institute of Singapore, NUS (2016 – 2017)
- Deputy Head of National Solarisation Centre, Solar Energy Research Institute of Singapore, NUS (2015 – 2016)

#### **PROFESSIONAL/CONSULTING ACTIVITIES:**

- Working Group Member on Energy Resources, Singapore Standardisation Programme (Present)
- Clean Energy Committee Member in the Sustainable Energy Association of Singapore (Present)
- Invited member for the 1<sup>st</sup> Economic Research Institute for ASEAN and East Asia Solar PV Work Group Meeting (2018)
- Invited contributor for the Super Low Energy Building Technology Roadmap by BCA (2018)
- Invited speaker and panelist for Sustainable Energy Technology Asia 2018 (2018)
- ASEAN Training of Trainers on Solar Technology for Renewable Energy Training Institutions (2018)
- Country representative for ACE-USAID Workshop on Renewable Energy Incentive (2017)
- Co-chair for PV Power System Workshop in the 26<sup>th</sup> International Photovoltaic Science and Engineering Conference (2016)
- Consultant for Imperial Consultants advising a Fortune Global 500 company (2013-2014)

## TEACHING:

- PF2105 Research Methods (Semester 2, 2018/2019)

## RESEARCH INTERESTS:

- Solar photovoltaic performance in the urban environment
- Materials for higher efficiency solar photovoltaic systems
- Performance ratio of solar photovoltaic systems

## SELECTED PUBLICATIONS:

- Ana AMAZO-BLANCO, Silvana TIEDEMANN, **Stephen TAY**, and Monika BIERI, *Why there is so much aggressive bidding at renewables auctions – and what the risks are*, Energy Post, 8 June 2018 (Industry article published in collaboration with Ecofys/Navigant Consulting)
- LEE Han Ho Lionel, and **Stephen TAY**, *Rapid high-level assessment of PV capacity or large scale deployment: A case study in Singapore*, 12th SNEC International Photovoltaic Power Generation and Smart Energy Conference, Shanghai, China (2018) (Oral Presentation)
- XU Le, ZHANG Ji, **Stephen TAY**, POON Kin Ho, and Thomas REINDL, *Modelling solar potential for detailed 3D buildings*, PV Asia Scientific Conference, Singapore (2017) (Oral Presentation)
- Mridul SAKHUJA, ZHANG Yin, LIM Fang Jeng, Parvathy K. KRISHNAKUMARI, TAN Congyi, **Stephen TAY**, Monika BIERI, ZHAO Lu, James HA, Eddy BLOKKEN, and Thomas REINDL, *The 'PV System Doctor' - smart diagnosis for photovoltaic systems*, PV TECH, May, 90-93 (2017)
- **Stephen E. R. TAY**, Angela E. GOODE, Johanna NELSON WEKER, Amy C. CRUICKSHANK, Sandrine HEUTZ, Alexandra E. PORTER, Mary P. RYAN, and Michael. F. TONEY, *Direct In situ Observation of ZnO Nucleation and Growth via Transmission X-ray Microscopy*, Nanoscale, 8, 1849 (2016)
- **Stephen E. R. TAY**, *The development of non-toxic and earth-abundant solar cells to reduce fossil fuel dependence*, Imperial Engineer, 18<sup>th</sup> issue (Spring 2013)
- Rachel LAWLER, Stuart IRVINE, **Stephen TAY**, and Henry SNAITH, *The rise of solar power*, Materials World, 21, 9, 28-29 (2013)
- Amy C. CRUICKSHANK, **Stephen E. R. TAY**, Benoit N. ILLY, Raffaello DA CAMPO, Stefan SCHUMANN, Tim S. JONES, Sandrine HEUTZ, Martyn A. MCLACHLAN, David W. MCCOMB, D. Jason RILEY, and Mary P. RYAN, *Electrodeposition of ZnO Nanostructures on Molecular Thin Films*, Chemistry of Materials, 23, 17, 3863-3870 (2011)

## AWARDS:

- Nanoscale article selected for the “2016 Nanoscale HOT Article Collection” and featured in the Stanford Synchrotron Radiation Lightsource Science Highlights (2016)
- 1<sup>st</sup> prize for presentation and poster competition, Electrophoretic Deposition V: Fundamentals and Applications (2014)
- 1<sup>st</sup> prize for technical presentations, IET Present Around the World Competition (UK South East Region) (2013)
- 1st prize, Royal School of Mines Association Essay Competition (2012)
- 1<sup>st</sup> prize for poster competition, Discover URECA@NTU (2010)
- NTU President Research Scholar (2009/2010)
- DSO-URECA Research Scholar (2008/2009)