

# Anthony Wang

Materials Science MSc. candidate

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## Skills Summary

- Proven skills in materials science R&D in academia and industry
- Hands-on experience in clean room and fabrication of thin-film devices
- Knowledgeable with electronic devices design, analysis, and fabrication methods
- Hard-working, creative, detailed, organized and very motivated to learn more

## Work Experience

- Since 11/2016 **Master Project**, *1<sup>st</sup> Physics Institute for Experimental Physics*, Aachen, Germany.
- EBSD and electronic characterization of chalcogenide materials for novel devices
- Since 11/2015 **Scientific Assistant**, *Fraunhofer Institute for Laser Technology*, Aachen, Germany.
- Testing and development of laser-based mass automobile manufacturing equipment
  - Conducting metal joining and welding research with various laser-based systems
  - Constructed a laser welding demonstration system for a conference in Munich
- 2013 – 2015 **Co-founder**, *evergrow (currently in start-up phase)*, Waterloo, Canada.
- Developed a novel fertilizer that addresses major shortfalls with existing products
  - Identified industrial market sector and need for a multi-functional fertilizer
  - Created prototype iterations that address customer and functional requirements
- 05 – 08/2014 **Research Intern**, *Fraunhofer Institute for Laser Technology*, Aachen, Germany.
- Researched & characterized laser parameter effects on joining of thin-film metals
  - Conducted rapid prototyping, iteration and design of experimental setups
  - Results were presented at an international conference (LAMP 2015, Japan)
- 01 – 04/2014 **Technical Advisor**, *Blake, Cassels & Graydon LLP*, Toronto, Canada.
- Drafted patent applications, response to Office Actions and patentability reports
  - Conducted preliminary FTO research and assisted in product innovation processes
  - Managed multiple client projects and requests simultaneously
- 01 – 04/2013 **Research Assistant**, *National Taiwan University*, Taipei, Taiwan.
- Designed and fabricated a novel temperature sensor at sub-micron resolution
  - Conducted CAD, simulation and fabrication of probe prototypes and equipment
  - Results were presented at an international conference (ISOT 2013, Korea)
- 2012 – 2013 **Undergraduate Research Assistant**, *University of Waterloo*, Canada.
- R&D of functionalized cellulose as carriers for medicinal materials
  - Studied drug-cellulose binding/release interactions using instruments such as ITC
- 09 – 12/2012 **Software Quality Assurance Co-op**, *Fixmo Inc.*, Toronto, Canada.
- Proposed and implemented a testing workflow, increasing performance by 30%
  - Discovered and reported critical issues encountered in testing to C-level executives

- 01 – 04/2012 **Formulations Engineer**, *University of British Columbia*, Vancouver, Canada.
- Assisted in R&D of novel lipid nanoparticles for delivery of therapeutic payloads
  - Testing of different formulations and prototype manufacturing equipment
- 01 – 04/2011 **Research Assistant**, *Bayer MaterialScience AG*, Leverkusen, Germany.
- R&D of carbon nanotube-glass fibre composites with numerous applications
  - Designed and conducted experiments using TGA, DSC, XPS, SEM, particle sizing and mechanical testing

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## Education

- Since 10/2015 **Materials Science M.Sc.**, *RWTH Aachen University*, Germany.
- Specializations: Nanotechnology and Electronic materials; Current average: *1,40*
- 2010 – 2015 **Nanotechnology Engineering BSc.**, *University of Waterloo*, Canada.
- Graduation with Distinction; Graduation average: *1,6 (87.84%)*
  - Dean’s Graduation Honours List; David Johnston International Experience Award
- 05 – 08/2014 **UROP International Student**, *RWTH Aachen University*, Aachen, Germany.
- UROP International Alumni Award; UROP International Scholarship
- 2005 – 2010 **Dogwood Diploma**, *Sentinel Secondary School*, West Vancouver, Canada, 4.0 GPA.

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## Scholarships & Awards

- 2017 Scholarship from Cologne Higher-education and Endowment Foundation, Germany
- 2017 Scholarship for Particularly Involved International Students, DAAD
- 2017 Science Assistant Certificate, RWTH Aachen University
- 2016 e-fellows.net Scholarship, e-fellows.net
- 2015 UROP International Alumni Award, RWTH Aachen University
- 2014 & 2015 Dean’s Graduation Honours List, University of Waterloo
- 2013 – 2015 Sandford Fleming Foundation Award, University of Waterloo
- 2014 Engineer of the Future Trust (for evergrow), University of Waterloo
- 2014 David Johnston International Experience Award, University of Waterloo
- 2014 UROP International Scholarship, RWTH Aachen University
- 2012 – 2014 President’s Research Award, University of Waterloo
- 2010 President’s Scholarship of Distinction, University of Waterloo
- 2010 Paul B. Spafford Scholarship, University of Waterloo
- 2010 David McClenahan Scholarship, Sentinel Secondary, West Vancouver
- 2010 Gold Medal for Academic Distinction, Sentinel Secondary, West Vancouver

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## Activities & Interests

- Involvement BeBuddy program at RWTH; FEDS employee (student union of UW); International Peer Mentor; UW German Society; UW International and Canadian Student Network.
- Languages Fluent in Mandarin Chinese and English, proficient in German (TestDaF 5/5/4/4).
- Interests Travelling, Hobby-DJ, Badminton, Ultimate Frisbee, Skiing, Solving Rubiks cubes.

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## Conferences attended

- 2017 DESY Research Course “Nanoscience at modern X-ray sources”, Hamburg, Germany
- 2016 Fraunhofer HiWi-Days at the Fraunhofer Society, Berlin, Germany
- 2016 atec2016 (Aachen Technology and Entrepreneurship Conference), Aachen, Germany

- 2016 Google Local Guides Summit, San Francisco & Mountain View, USA
- 2015 atec2015 (Aachen Technology and Entrepreneurship Conference), Aachen, Germany
- 2014 Velocity Start-up pitch nights (series), Waterloo, Canada
- 2013 BrainSTEM Festival, Perimeter Institute, Waterloo, Canada
- 2013 Design Our Tomorrow 2013 (DOT 2013), Toronto, Canada
- 2012 BlackBerry 10 Jam developer conference, Kitchener, Canada
- 2012 UBC Life Sciences Exhibition & Poster Session, Vancouver, Canada

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## Publications

Simon W. Britten, Anthony Yu-Tung Wang, Alexander Olowinsky, and Arnold Gillner. Measurement of the vapor plume velocity in laser impulse metal bonding with temporal power modulation. In *LAMP 2015—The 7th International Congress on Laser Advanced Materials Processing*, 2015.

Anthony Yu-Tung Wang, Cheng-Chun Huang, Yao-Chuan Tsai, Ming-Dao Wu, Dao Liang, Po-Jen Shih, and Wen-Pin Shih. *Thermal Manipulation Utilizing Micro-cantilever Probe in Scanning Electron Microscopy*, volume 306 of *Lecture Notes in Electrical Engineering (LNEE), Progress in Optomechatronic Technologies*, chapter 18, pages 169–180. Springer International Publishing Switzerland, 2014.