

# Wei Tian

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## Education

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Ph.D., Nuclear Engineering and Radiological Sciences, University of Michigan	Advisor: Prof. Mark J. Kushner	(Sep. 2010 -- present)
M.S., Nuclear Science and Technology, Tsinghua University	Advisor: Prof. Yi-Kang Pu	(Sep. 2008 – Jul. 2010)
B.S., Fundamental Mathematics and Physics, Tsinghua University	Thesis advisor: Prof. Yi-Kang Pu	(Sep. 2004 – Jul. 2008)

## Research and Related Activities

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- Plasma ignition and propagation in liquids, Sep. 2010 -- present
  - Simulate the ignition and propagation of plasma using current model, NONPDPSIM MODEL
  - Develop a model including more detailed reactions with liquids
  - Explain the plasma behavior in liquids
- “Different patterns of high-energy and low-energy electrons in an atmospheric-pressure microplasma generated by a hairpin resonator”, published by *Journal of Physics D: Applied Physics, Fast Track Communication*, February 2010
  - Developed a hairpin resonator to generate a microplasma
  - Observed self-organized patterns of hairpin resonator discharge
  - Found that high-energy electrons distributed pattern-like in the gap, while the low-energy ones have a uniform distribution, and explained it by taking the characteristic length of electrons into consideration
- "Electron density measurement by a hairpin probe in pulsed inductively coupled plasma", poster, *The 9th Asia-Pacific Conference on Plasma Science and Technology*, October 2008
  - Developed a time-resolved measurement of electron density using a hairpin probe in pulsed ICP
  - Compared the results with those obtained by a Langmuir probe and found they were consistent
- “Electron density measurement used a hairpin probe in ICP and CCP” , thesis, May 2008
  - Made a hairpin probe suitable for electron density measurement
  - Compared the results with those obtained by a Langmuir probe in ICP and CCP
  - Found that the width of a hairpin probe exerts a significant impact on measurement
- “Design of a Langmuir probe suitable for an atmospheric-pressure plasma”, Student Research Training Program, October 2007

- Re-derived all the formulas about the Langmuir probe theory
- Found a suitable theory for a Langmuir probe working in an atmospheric-pressure plasma
- Made a Langmuir probe suitable for atmospheric-pressure plasmas
- The 9th Asia-Pacific Conference on Plasma Science and Technology, *Volunteer*, Mount Huang, August -- October 2008
  - Processed submitted abstracts and resumes
  - Organized poster exhibition section
- Seminar in Physics, *co-organizer*, The Hong Kong Polytechnic University, July 2007
  - Arranged for a series of lectures presented by professors at Hong Kong Polytechnic University
  - Organized student discussion sessions
  - Conducted experiments in super-conductors, velocity measurement by laser, measurement of electrical-magnetic characteristics of semi-conductors at the Modern Physics Lab
- Tsinghua University Challenge Cup Exhibition, *organizer*, Xinjiang Autonomous Region, August 2005
  - Exhibited and presented projects winning the Challenge Cup to local students
  - Organized a physics experiment contest

### ***Awards Received***

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Tsinghua University Social Work Scholarship Award, 1st prize, 2007

Social Work Scholarship Award, 2nd prize, Department of Physics, Tsinghua University, 2006

Social Work Scholarship Award, 3rd prize, Department of Physics, Tsinghua University, 2005