Peifeng Huang

Gender: Male; Data of Birth: 11/27/1990;
Email: pfhuang@mail.ustc.edu.cn;
Address: 2250 Dartmouth, APT 614, college station, TX-77840

Education

- 2016.9-2017.10 Joint Ph.D. student, Energy and Transport Sciences Lab, Department of Mechanical Engineering, **Texas A&M University (TAMU)**
- 2015.8-2018.6 Ph.D. Candidate, State Key Laboratory of Fire Science, Department of Safety Science and Engineering, **University of Science and Technology of China (USTC)**
- 2013.8-2015.6 M.S. student, State Key Laboratory of Fire Science, Department of Safety Science and Engineering, **University of Science and Technology of China (USTC)**
- 2009.8-2013.6 Undergraduate student, Department of Safety Engineering, School of Engineering and Science , **University of Science and Technology of China (USTC).** Overall **GPA**:3.43/4.30

Skills & Research direction

- Proficiency in operations and theoretic knowledge of various thermal analysis techniques, such as C80 micro calorimeter, ARC calorimeter, etc.
- Proficiency in COMSOL Multiphysics, Word, Excel, Powerpoint, Origin, AutoCAD, C, Matlab, Fortran, Endnote, etc.
- Research direction focus on the main point of thermal runaway mechanism and thermal analysis of lithium ion battery especially for large scale batteries.

Research Experience

- 2015.6 – present Study for a doctor's degree in USTC, supervised by Prof. Jinhua Sun, Dr. Qingsong Wang

  2015.6 – present Establishing a model to predict thermal runaway of lithium ion battery. Modeling study the electrochemical-thermal coupling performance of lithium ion battery. Study the variation of inner temperature and pressure during the thermal runaway process of lithium ion battery.
- 2013.9 – 2015.6 Study for a master's degree in USTC, supervised by Prof. Jinhua Sun, Dr. Qingsong Wang.

  2014.11- 2015.6 Studied the gas generation reactions and the heat generation and transfer during thermal runaway. Investigating the heat generation mechanism and yield and compose of gases by C80 micro calorimeter, GC7820 and XRD.

  2014.4 -2014.11 Studied the mechanism of thermal runaway of Li-ion battery. Investigated the combustion behavior of large-scale Li-ion battery induced by heat radiation under the self-designed test bed.

  2013.8- 2014.4 Studied basic technology to make Li-ion batteries and read literatures about thermal runaway of Li-ion battery.
- 2009.9 – 2013.6 Study for a bachelor's degree in USTC

  National University Student Innovation Program (from May 2012 – May 2013). We surveyed the knowledge about origin of PM2.5, and found the combustion of straw is one of these reasons. So we measured the diameter distribution of the smoke produced by combustion of straw and finally published a paper in a periodical.

  The 11th RoboGame Robot Contest (From June 2011 to Oct. 2011). The work I did was mechanical designing

and programming. Our team created a cook robot to cook soups and ranked 5th in 39 teams at the end of contest.

Awards

"Nong Mei" Scholarship	2010, 2012
Outstanding Student Scholarship	2011
Award-winning performance in the 11th RoboGame Robot Contest	2011
Outstanding Young Volunteer	2014
Excellent Student Cadre	2014
National Scholarship	2015

Extracurricular Activities

2013-2014	Vice minister of Graduate Student Union in the department of Academic Science and Technology
2010, 2011	Champion of table tennis match in our department
2009-2010	Young Volunteer of China

Publications

1. **Huang P**, Wang Q, Li K, Ping P, Sun J. The combustion behavior of large scale lithium titanate battery. Sci Rep, 2015, 5: 7788.
2. **Huang P**, Ping P, Li K, Chen H et al. Experimental and modeling analysis of thermal runaway propagation over the large format energy storage battery module with $Li_4Ti_5O_{12}$ anode. Applied Energy. (Accepted)
3. Ping P, Wang QS, **Huang PF**, Sun JH, Chen CH. Thermal behaviour analysis of lithium-ion battery at elevated temperature using deconvolution method. Applied Energy, 2014, 129: 261-273.
4. Ping P, Wang Q S, **Huang PF**, et al. Study of the fire behavior of high-energy lithium-ion batteries with full-scale burning test. Journal of Power Sources, 2015, 285: 80-89.
5. Ye J, Chen H, Wang Q S, **Huang PF**, et al. Thermal behavior and failure mechanism of lithium ion cells during overcharge under adiabatic conditions. Applied Energy. (Accepted)