

# QICHEN SONG

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✉ kitchensong@gmail.com

## EDUCATION

**Huazhong University of Science and Technology (HUST), 2011.09-present**

Major: Thermal Energy and Power Engineering

Degree: Bachelor of Engineering, expected 2015.06

Overall GPA: 92.2/100 Overall Rank: 1/366

**Standardized Tests**

TOFEL: 107 (R29 L30 S23 W25)

GRE: V152+Q170+AW4.0

## RESEARCH EXPERIENCE

**Research on coupling between different phonon modes in graphene**

2014.09-present

Advisor: Prof. Nuo Yang, Dr. Meng An Nano Heat Group

- Built an model to manipulate in-plane/out-of-plane temperature gradient
- Investigated coupling between different phonon modes (TA, LA and ZA) and their contributions to thermal conductivity

**Research on modulation of thermal conductivity in folded graphene**

2013.11-present

Advisor: Prof. Nuo Yang Nano Heat Group

- Independently wrote FORTRAN code of nonequilibrium molecular dynamics
- Designed innovative structure to reduce the thermal conductivity significantly
- Obtained size-independent thermal conductivity that characterizes large-area folded graphene's thermal properties

**Research on the temperature and flow field analysis of sapphire crystal growth**

2013.08-2013.11

Advisor: Prof. Haisheng Fang Multiscale Process Modeling Lab

- Comprehensively investigated varied flow fields' influence on sapphire growth
- Used Discrete Phase Model to investigate the distribution of inert impurities
- Simplified the complex system and found a new way to improve sapphire's quality

**Team leader on designing the device utilizing wave energy in small watersheds**

2013.05-2013.08

Advisor: Prof. Jun Xiang

- Designed the innovative machine to harvest small wave energy
- Successfully optimized the structure by modeling and effectively improved the energy conversion efficiency
- Made the prototype of the device

## PATENT

Q.C. Song et al, 'An electricity generating device by utilizing small wave energy' (CN201420634269.0)

## HONORS AND AWARDS

**Warren M. Rohsenow Fellowship**

2015-2016

Awarded by Department of Mechanical Engineering, MIT

**National Scholarship (Three times)**

2012,2013,2014

Top 1% among all competitors, awarded by Ministry of Education of PRC

**Outstanding Student of Huazhong Univ. of Sci. & Tech.**

2012-2014

Top 1% among all 2nd & 3rd year students, one of the top honor for undergraduates

**Excellent Award in the 3rd National Water Resource Innovation Design Competition**

2013.07

## INTERNSHIP EXPERIENCE

**Summer Intership at Shangu Power Co.,Ltd., Xi'an**

2014.06

- Learned details of manufacturing process of tail gas turbine
- Systematically learned the CFD computation methods for turbine design

## COMPUTER SKILLS

FORTRAN90(MPI), C++, Fluent, AutoCAD, MATLAB/Simulink,  $\text{\LaTeX}$