



College of Science
Department of Physics & Astronomy

Oct 26, 2018

Dear Members of the Faculty Search Committee,

My name is Jing-Han Chen. I am writing to apply for the position of Assistant Professor at Texas Tech University. After earning my Ph.D. in Applied Physics at Texas A&M University in 2015, I was a postdoc in Chemistry Department at Rice University in 2016. Since 2017, I've worked as a postdoc at Louisiana State University.

In addition to my extensive research experience in experimental solid state physics, I taught the recitations and lab for the undergraduate as well as have been training the graduate students in the research labs. I will develop the lab which concentrates on understanding the phase transitions in solid state materials by measuring their thermal, magnetic and mechanical properties. I believe my lab would fit well in your vibrant research environment, and both students and faculty can benefit from interactive and productive collaborations.

During my Ph.D. career, I have received rigorous training in experimental solid state physics, including solid state nuclear magnetic resonance, X-ray diffraction, cryogenic systems, metallurgical synthesis, magnetometer and calorimeter. Besides, I have gained extensive experience on interpreting the experimental data by means of density functional theory calculation. After completing my Ph.D. in 2015, I joined synthetic inorganic chemistry lab at Rice University. I focused on magnetic and thermal properties of phosphides compounds. Shortly after joining Rice University, I built up the automatic temperature regulator in the home-built metalorganic vapor deposition apparatus, which led to improve the synthetic productivity and quality significantly. As a physicist in an inorganic chemistry lab, I enjoyed developing the experimental strategy in the collaborative environment with chemists within the limitation of time and resource. Since 2017 I have been a postdoc at Louisiana State University. I focus on Ni-Mn based Heusler alloys and MnNiSi based compounds, both exhibiting strong caloric responses due to martensitic transitions. Also I designed the robotic experimental protocols to identify the root cause of the inconsistent results among different experiments.

Besides my own productive research, my co-authorship of several publications manifests my successful experience of training students and of collaborating with scientists from diverse background. I would appreciate your time to review my qualifications in more detail and look forward to speaking with you further.

Regards,

A handwritten signature in black ink that reads "Jing-Han Chen". The signature is written in a cursive style with a large, stylized 'J' and 'C'.

Jing-Han Chen, Ph.D

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