The greatest scientific advance of the next decade will be the development of energy-efficient and smart electric vehicles.

When I was a kid I wanted to be a scientist and the dream comes true!

Chemistry is fun because one can combine simple atoms together to tackle various complicated problems and make a difference to the world.

The principal aspect of my personality is curiosity about things I do not know, whether about research or not.

The best advice I have ever been given is to review what I have done and learnt each day and then make plans for tomorrow.

The most important quality of a mentor is to inspire students’ curiosity and motivation about research.

The most important thing I have learned from my students is to be supportive for their ideas and be patient about their results.

My group has fun by enjoying group activities, such as sport, dining, and … lab cleaning!

My favorite thing about my lab group is the openness and mutual support for cohesive research goals.

I lose track of time when I am writing manuscripts.

My biggest inspiration is to learn interesting knowledge and come up with new ideas, no matter how stupid they may seem.

What I appreciate most about my friends is they can always motivate me to think bigger and aim higher.

My favorite food is dumpling and noodle.

My top three films of all time are Forrest Gump, Big Fish and The Pursuit of Happyness.

My secret passion is cooking, which is much like doing experiments.

Behind the Science

Electrolytes play an essential role in the stable and safe operation of batteries. One common question I encountered is how to make ether electrolytes anodically stable and nonflammable for high-energy-density batteries. This motivated us to look into different possible fire-retarding mechanisms. Fortunately, we found the chloroether molecule, 1,2-bis(2-chloroethoxy)-ethyl ether (Cl-DEE), whose chlorine groups are good radical scavengers and effective for enhancing the oxidation stability. It was surprising to us that the chloroether-based electrolyte can withstand a high voltage of 4.7 V. It will offer great opportunities for various energy storage applications.
"My group has fun by enjoying group activities, such as sport, dining, and … lab cleaning … The principal aspect of my personality is curiosity about things I do not know, whether about research or not …" 
Find out more about Xiaodi Ren in his Introducing … Profile.