Q&A

(In our group, I’m responsible for both question part and answering part)

Q1: I have one question for professor Wu. Professor, I’d like to know why there are only two kinds of motor widely used in electric vehicles instead of other motor, such as DC motor?

A1:Thanks for your question, please sit down. Based on the advantages and disadvantages I’ve already introduced, I’d like to supplement some details. Compared with DC motor, AC motor presents better maneuverability and provide both larger output torque and higher output speed. As for DC motor, such as series excited DC motor, even it can output large torque, cannot stable on high speed. Another form of DC motor, Permanent Magnetic DC motor, always compared with noise that is beyond the acceptable level. Thus DC motor is withdrawing from the market gradually.

Q2: Professor, I’m afraid I can’t agree with your opinion that “Electric vehicles will replace traditional fuel vehicles”. It seems that electric vehicles may reduce the carbon footprint, but the generation of electric energy itself will consume some traditional fuel and produce some harmful gas. In this way, using electric vehicles may not solve the problem caused by traditional fuel vehicles. I would like to hear your opinion in this aspect.

A2:That’s a good question, sit down please. I should reiterate my opinion that it is new energy vehicle will replace traditional fuel vehicle, and EV is just a general kind of it. As for your worry about the pollution brought by EV, it comes down to another research from our group. Considering we only have a few minutes left, I will introduce the result of the research briefly. In that research, we have assess the consumption, converted to raw material, and gas footprints of EV and traditional vehicle running per mile, and we found that traveling equal mileage, EV still consumed far less material and produced less gas than traditional vehicle. Based on the experimental data, we can get a conclude that EV is superior to traditional vehicle. Thus, your concern is very reasonable, and we’ve already sdutied on it. Hope you are satisfied with my answer.