

Message from Editors

THE rapid growth of new energy vehicles is accelerating the low-carbon transition in the global transportation sector. According to the international energy agency report, more than 10 million electric vehicles (EVs) including pure electric and hybrid models were sold worldwide in 2022, which means that the global share of electric vehicles in the overall automotive market has risen from less than 5% in 2020 to 14% in 2022. Adoption of these 10 million EVs has reduced greenhouse emissions by a net amount of about 80 million tons. Along with rapid deployment of battery charging and swapping stations, it is expected for EVs to reduce oil demand by at least 5 million barrels per day and more CO₂ emissions by EVs in 2030.

It is a great honor for me to witness this great revolution and to meet many friends and colleagues in the process. We gathered here to discuss issues related to electric vehicle motors, not only motor performance improvement, motor drive system electromagnetic interference and system fault diagnosis etc. In the next few issues, there will still be articles to continue this topic, and more extensive and in-depth exchanges around power electronic topology, devices, control and other content. At the same time, I would also like to express my sincere gratitude to the scholars and staff who are in charge of the review of this essay. I am deeply impressed by the hard-working and rigorous academic style of all colleagues, which ensures the high academic and logical rigor of this essay.

Science and technology have changed the world, wish all people enjoy a more convenient life and a more comfortable environment.

Professor Xuhui Wen

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Professor. Xuhui Wen received PhD degree from Tsinghua University in 1993, since then she joined Institute of Electrical Engineering, Chinese Academy of Sciences. Now she is department head, full professor, doctoral adviser and vice supervisor of academic degree commission of IEE CAS, Chairman of Electric Vehicle Committee of China Electrotechnical Society, senior member of IEEE.

Professor Wen's main research includes high power density e-motor drive and power electronic technology such as PM motor control, power electronics integration and power module packing etc., with the main application areas of electrical vehicle. Hitherto, Professor Wen authored and co-authored more than 300 papers and more than ten patents issued, won several national and industrial scientific and technological awards.

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