

Yoshino Akira

Position/Department/Division/Institution/Organization

Director, Global Zero Emission Research Center (GZR), National Institute of Advanced Industrial Science and Technology (AIST)

Country

Japan

Career history

Dr. Yoshino, a native of Japan, was born on January 30, 1948, and earned a B.S. and M.S. in engineering from the Department of Petroleum Chemistry at Kyoto University in 1970 and 1972, respectively. In 1972, he joined the research organization of Asahi Kasei Corp. in Kawasaki, Kanagawa, Japan, where he engaged in research on functional polymers and electronic materials. In 1981, he started a research effort on high-energy-density secondary batteries. In 1985, he invented a new battery system of C/LiCoO₂, which would become known as the lithium-ion battery (LIB). He also developed a range of basic technologies required to make the LIB practical, such as methods to fabricate electrodes using metal foil current collectors, microporous separators made of polyethylene, carbonate-based electrolytes, safety devices, and charging methods. In 1992 he moved to A&T Battery Corp., a joint venture between Asahi Kasei and Toshiba for commercial LIB manufacture. In 1996, he returned to Asahi Kasei and continued further LIB research.

Awards/Publications

The Nobel Prize in Chemistry

Areas of expertise

Electrochemistry