

Nano-structured carbon materials as an additive conductor in organic lithium ion battery

Dong-ik Cheong , Sang-hyeon Ha, Hyun-ki Yoon, Jae-seong Yeo, Eun-ji Yoo, Sung-baek Cho ^(a) , Ki-suk Kang ^(b) .

- a. Agency for Defense Development, Daejeon, Korea
- b. Seoul National University, Seoul, Korea

Address: Yuseong P.O.Box 35-41, Daejeon, 305-600, Korea

Address: 1 Gwanak-ro, Gwanak-gu, Seoul, 151-742, Korea

Cathodes of lithium ion batteries are usually made of active material, binder and additive conductor. Among these materials, additive conductor has an important role in discharge performance by enhancing the conductivity of cathodes. We will present the effects of nano-structured carbon materials such as carbon nanotube(CNT) and hybrid carbon nanofibers grown on carbon fiber(CNFs/CF) as additive conductors for organic lithium ion batteries.

We compared the performances of these materials with organic and inorganic cathodes by impedance analysis. And the results of microstructural analysis to investigate a reason for this performance difference will be also presented.