

Nippon Chemi-Con Corporation

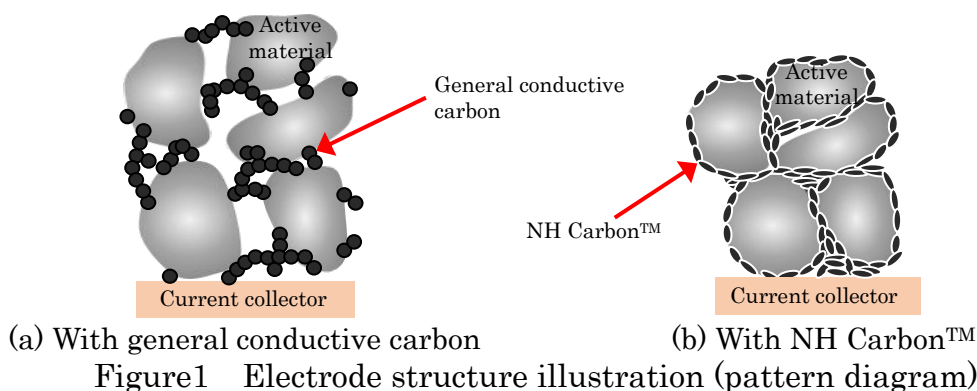
June 23, 2021

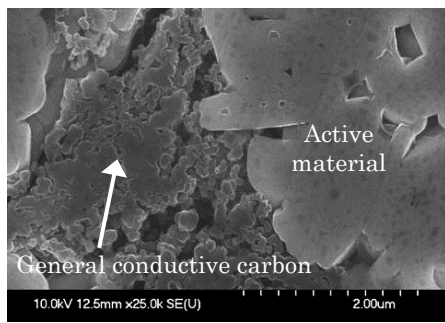
Novel Conductive Carbon “NH Carbon™” for Lithium-Ion Batteries Collaboration of Nippon Chemi-Con and Asahi Carbon for development of mass production technology

Nippon Chemi-Con Corporation (Representative Director and President Norio Kamiyama) and Asahi Carbon Co., Ltd. (Representative Director and President Hiroshi Yoshida) have agreed to collaborate on the development of mass production technology and manufacturing of NH Carbon™, a conductive assistant for lithium-ion batteries. Both companies will develop mass production technology, and in future years, Asahi Carbon will handle manufacturing with their production technology and production facilities for various types of carbon black, while Nippon Chemi-Con will be responsible for sales.

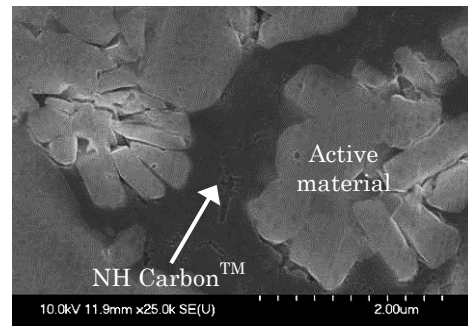
NH Carbon™ is a material for next-generation electricity storage devices developed by Nippon Chemi-Con, and the mass production technology for this material will be co-developed by Nippon Chemi-Con and Asahi Carbon. NH Carbon™ is based on the "nano-hybrid technology," a manufacturing technology of electrode materials for capacitors co-developed by Tokyo University of Agriculture and Technology, on-campus venture company K&W Inc. and Nippon Chemi-Con.

NH Carbon™ is a unique carbon material that has never been seen before in that it can change its shape and be coated on the surface of active material when being kneaded with active material or during the press-forming of electrodes (Figure 1, Figure 2). By using it in the anodes and cathodes of lithium-ion batteries and all-solid-state lithium-ion batteries, it is especially effective in improving the charge-discharge cycle life by 2 to 3 times, as well as improving electrode density and reducing electrode resistance.





(a) With general conductive carbon



(b) With NH Carbon™

Figure2 Cross-sectional SEM images of electrodes

Hereafter, the two companies will work together to promote the full-scale mass production of NH Carbon™ and expand sales to customers.

NH Carbon™ will be used in the world's first sulfide compact all-solid-state battery that Maxell, Ltd. is aiming to commercialize.

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