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Al-Modified SiCN Carbon Nanotube Coatings as Lithium ion Battery Electrode[1] LAMUEL DAVID, DEEPU ASOK, GURPREET SINGH, Kansas State University — Aluminium modified poly(ureamethylvinyl)silazane were blended with carbon nanotubes and pyrolyzed to synthesize SiAlCN-CNT composite. The structural and chemical characterization of the composite prepared were carried out using electron microscopy, XRD, and FT-infrared spectroscopy. The SiAlCN-CNT composite anodes showed stable charge capacity of 850 mAh/g at 100 mA/g and 550 mAh/g even at high current density of 10000 mA/g. The average columbic efficiency (second cycle onwards) was observed to be approx. 99%.

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Lamuel David
Kansas State University

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