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Dichalcogenide Nanotube Electrodes for Li-Ion Batteries. — One-dimensional $MoS_{2-x}I_y$ nanotube bundles can controllably absorb and release relatively large amounts of Li ions in one-dimensional storage channels and can form the basis for a promising and safe new battery electrode material. A typical cell shows a charge capacity in the first charge cycle of approximately 385 $mAhg^{-1}$ corresponding to an intercalation of 2.3 moles of Li per mole of nanotubes. This is more than two times higher than in layered MoS_2 with the same cell configuration. It is proposed that the observed behavior can be explained by the particular one-dimensional topology of the single-wall MoS_{2-x} nanotube structures. The use of dichalcogenide nanotubes rather than carbon has some important advantages. — (DOMINKO, R.; ARCON*, D.; MRZEL, A.; ZORKO, A.; CEVC, P.; VENTURINI, P.; GABERSCEK, M.; RAMSKAR, M.; MIHAILOVIC, D.; Adv. Mater. (Weinheim, Ger.) 14 (2002) 21, 1531-1534; Jozef Stefan Inst., Univ. Ljubljana, 1000 Ljubljana, Slovenia; Eng.) — W. Pewestorf