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| Title | Carbon-coated rhombohedral Li2NaV2(PO4)3 nanoflake cathode for Li-ion battery with excellent cycleability and rate capability. | | |
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| Abstract |  |
| Rhombohedral Li2NaV2(PO4)3 is very attractive cathode material for lithium-ion battery (LIB) application due to its single voltage plateau at 3.7 V that provides a constant output power. Here, for the first time, we report a direct and simple synthesis of high-performance carbon-coated rhombohedral Li2NaV2(PO4)3 (LNVP/C) nanoflake cathode using a pyro-synthesis technique. The cathode demonstrates long cycle stability (100% capacity retention over 300 cycles) and high-rate capabilities (77 and 55 mAh g−1 at 6.4 and 12C, respectively). The present study may facilitate a simple and low-cost preparation technique towards high performance cathode materials for advanced LIB applications. | |