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Nanomaterials and the World Lithium Ion Battery Market: Applications, Products, End User Markets, Companies and Revenues

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Abstracts

Lithium ion batteries have received considerable attention in applications ranging from portable electronics to electric vehicles and plug-in hybrids, due to their superior energy density over other rechargeable battery technologies. Market demand for lighter, thinner and higher capacity lithium ion batteries necessitate ongoing research for new materials with improved properties over that of state-of-the-art. Nanostructured materials are allowing companies to develop the next generation of clean energy storage devices with high power density, high energy density and high safety for application in sectors such as hybrid electric vehicles (HEV), plug in hybrid electric vehicles (PHEV) and pure electric vehicles (PEV). Automotive companies such as Chrysler utilize nanomaterials in their electric vehicles to improve battery capacity, cycle life, and charge-discharge rates while a high degree of safety.

Other large multinational companies developing nanomaterial based battery products include GE, Panasonic Sanyo, Matsushita Industrial Co., Ltd., NEC, Toshiba, LG Chem, Samsung and Sony for application in areas such as cell phones and PCs, medical devices, military applications and cordless power tools. Innovative product developers and materials producers include A123 Systems, mPhase Technologies and Altair Nanotechnologies. The world market for nanomaterial enabled lithium ion battery systems was $63million in 2010, rising to $575million by 2017.

Report contents include:

How carbon nanotubes, fullerenes and POSS, graphene, metal oxide nanopowders, metal nanopowders, nanofibers, nanoporous materials, and

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nanowires are being applied to lithium ion batteries and by whom

Global market revenues to 2017, by nanomaterials

Market structure

Market drivers

75 company profiles including products and sub sector markets

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