Na-ion Batteries
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DESCRIPTION
This book covers both the fundamental and applied aspects of advanced Na-ion batteries (NIB) which have proven to be a potential challenger to Li-ion batteries. Both the chemistry and design of positive and negative electrode materials are examined. In NIB, the electrolyte is also a crucial part of the batteries and the recent research, showing a possible alternative to classical electrolytes with the development of ionic liquid-based electrolytes is also explored.

Cycling performance in NIB is also strongly associated with the quality of the electrode-electrolyte interface, where electrolyte degradation takes place; thus, Na-ion Batteries details the recent achievements in furthering knowledge of this interface. Finally, as the ultimate goal is commercialization of this new electrical storage technology, the last chapters are dedicated to the industrial point of view, given by two startup companies, who developed two different NIB chemistries for complementary applications and markets.

ABOUT THE AUTHOR
Laure Monconduit holds a PhD from the Institut des Matériaux Jean Rouxel and is CNRS Senior Researcher at Charles Gerhardt Institute (CNRS UMR 5253) at the University of Montpellier, France. Her current research interests include the synthesis and characterization of negative electrode materials for Li-ion, and post-Li systems (Na-, K-, Mg-ion) by operando characterization techniques.
Laurence Croguennec holds a PhD from the Institut des Matériaux Jean Rouxel at Nantes University, France, and is CNRS Senior Researcher at ICMCB in Bordeaux, France. Her research is focused in the field of electrode materials for Li- and Na-ion batteries: crystal chemistry of oxides and phosphates, and the characterization of mechanisms involved upon cycling.

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