Main Group Strategies towards Functional Hybrid Materials

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DESCRIPTION

Showcases the highly beneficial features arising from the presence of main group elements in organic materials, for the development of more sophisticated, yet simple advanced functional materials

Functional organic materials are already a huge area of academic and industrial interest for a host of electronic applications such as Organic Light-Emitting Diodes (OLEDs), Organic Photovoltaics (OPVs), Organic Field-Effect Transistors (OFETs), and more recently Organic Batteries. They are also relevant to a plethora of functional sensory applications. This book provides an in-depth overview of the expanding field of functional hybrid materials, highlighting the incredibly positive aspects of main group centers and strategies that are furthering the creation of better functional materials.

Main Group Strategies towards Functional Hybrid Materials features contributions from top specialists in the field, discussing the molecular, supramolecular and polymeric materials and applications of boron, silicon, phosphorus, sulfur, and their higher homologues. Hypervalent materials based on the heavier main group elements are also covered. The structure of the book allows the reader to compare differences and similarities between related strategies for several groups of elements, and to draw crosslinks between different sections.

• The incorporation of main group elements into functional organic materials has emerged as an efficient strategy for tuning materials properties for a wide range of practical applications

• Covers molecular, supramolecular and polymeric materials featuring boron, silicon, phosphorus, sulfur, and their higher homologues
Main Group Strategies towards Functional Hybrid Materials is an essential reference for organo-main group chemists pursuing new advanced functional materials, and for researchers and graduate students working in the fields of organic materials, hybrid materials, main group chemistry, and polymer chemistry.

ABOUT THE AUTHOR

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