### DESCRIPTION

This book comprehensively covers iodine, its chemistry, and its role in functional materials, reagents, and compounds.

- Provides an up-to-date, detailed overview of iodine chemistry with discussion on elemental aspects: characteristics, properties, iodides, and halogen bonding
- Acts as a useful guide for readers to learn how to synthesize complex compounds using iodine reagents or intermediates
- Describes traditional and modern processing techniques, such as starch, cupper, blowing out, and ion exchange resin methods
- Includes seven detailed sections devoted to the applications of iodine: Characteristics, Production, Synthesis, Biological Applications, Industrial Applications, Bioorganic Chemistry and Environmental Chemistry, and Radioisotopes
- Features hot topics in the field, such as hypervalent iodine-mediated cross coupling reactions, agrochemicals, dye sensitized solar cells, and therapeutic agents

### ABOUT THE AUTHOR

**Tatsuo Kaiho** is the Director of Nihon Tennen Gas Co., Ltd. (Chiba, Japan), one of the most well-known iodine manufacturing companies in the world. The Director of the Society of Iodine Science, Dr. Kaiho developed novel iodine-containing materials and processes and presented independent research at many conferences, including the International Conference of Hypervalent Iodine.
Chemistry (2010) and the Symposium of Iodine Science (2011). Dr. Kaiho has received several awards, such as the Distinguished Chemist Award from Chiba Prefectural Government (2001) and the Society of Iodine Science Award (2012).

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