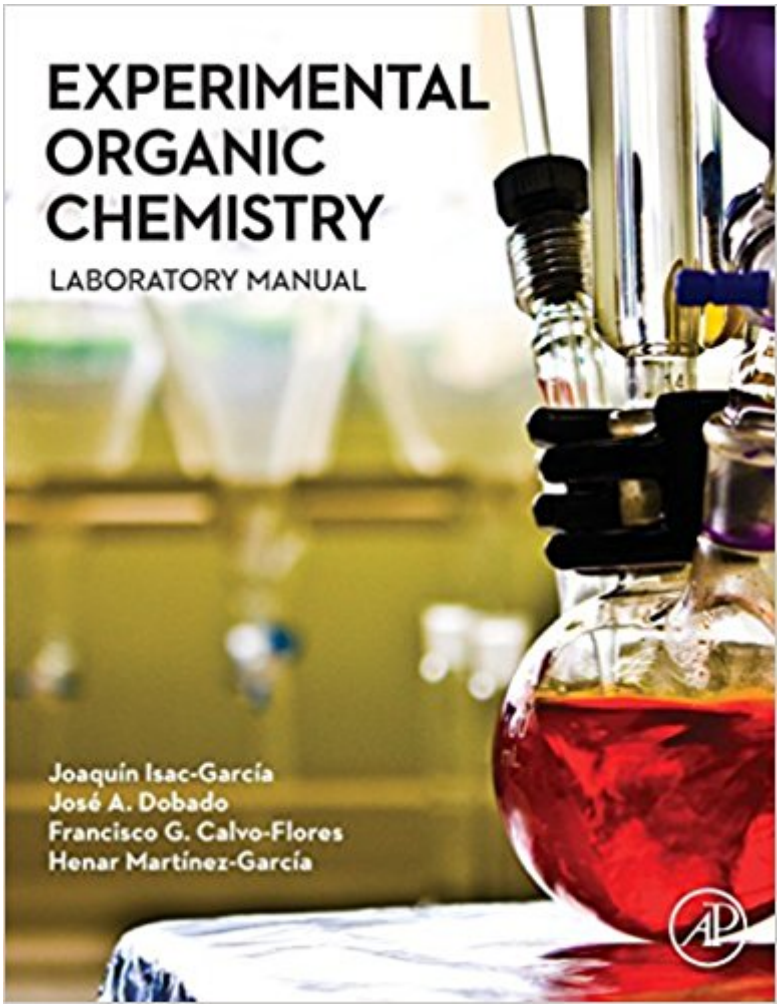
Experimental Organic Chemistry: Laboratory Manual



Synopsis

Experimental Organic Chemistry: Laboratory Manual is designed as a primer to initiate students in Organic Chemistry laboratory work. Organic Chemistry is an eminently experimental science that is based on a well-established theoretical framework where the basic aspects are well established but at the same time are under constant development. Therefore, it is essential for future professionals to develop a strong background in the laboratory as soon as possible, forming good habits from the outset and developing the necessary skills to address the challenges of the experimental work. This book is divided into three parts. In the first, safety issues in laboratories are addressed, offering tips for keeping laboratory notebooks. In the second, the material, the main basic laboratory procedures, preparation of samples for different spectroscopic techniques, Microscale, Green Chemistry, and qualitative organic analysis are described. The third part consists of a collection of 84 experiments, divided into 5 modules and arranged according to complexity. The last two chapters are devoted to the practices at Microscale Synthesis and Green Chemistry, seeking alternatives to traditional Organic Chemistry.Organizes lab course coverage in a logical and useful wayFeatures a valuable chapter on Green Chemistry ExperimentsIncludes 84 experiments arranged according to increasing complexity

Book Information

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Customer Reviews

Experimental Organic Chemistry: Laboratory Manual introduces students to organic chemistry laboratory work. Organic chemistry is an eminently experimental science based on a recognized theoretical framework in which the basic aspects are well established but also under constant

development. Therefore, it is essential for future professionals to develop a strong background in the organic chemistry laboratory, acquiring good habits from the outset and developing the necessary skills to address the challenges of such experimental work. The book covers topics including safety issues in laboratories; tips for keeping laboratory notebooks; basic laboratory equipment, material, and procedures; key physical and spectroscopic properties to characterize organic compounds and sample preparation; qualitative organic analysis for the main functional groups; setups for training students on basic operations; basic and advanced organic chemistry experiments; operations of a laboratory performed with Microscale equipment; a collection of experiments with Microscale techniques; and Green Chemistry principles and experiments. Microscale and Green Chemistry experiments are introduced as alternatives to traditional organic chemistry to provide more sustainable and less hazardous procedures in an undergraduate organic chemistry laboratory. Key features Organizes lab course coverage in a logical and useful wayFeatures a valuable chapter on Green Chemistry experimentsIncludes 100 experiments arranged according to increasing complexity Cover photo courtesy of Dr. Angel SÃ¡nchez GonzÃ¡lez

JoaquÃn GarcÃa Isac is an Associate Professor in the Department of Organic Chemistry at the University of Granada.JosÃ© Antonio Jimenez Dobado received his PhD in Chemistry at the University of Granada in 1994. From 1995 to 1997, he was a postdoctoral fellow at Zurich University and Helsinki University. He joined the Department of Organic Chemistry at the University of Granada as a postdoctoral researcher from 1997 to 1998, Associate Professor from 1998 to 2002, and Profesor since 2003. In that period, he spent also several months at McMaster University and Helsinki University. His area of research is in computational Chemistry, and he directs the Molecular Modelling and Design research group financed (FQM-174) by the Andalusian Government.Francisco GarcÃa Calvo-Flores is a Professor of Organic Chemistry at the University of Granada.Henar MartÃnez GarcÃa is in the Department of Organic Chemistry in the School of Industrial Engineering at the University of Valladolid.

Experimental Organic Chemistry: Laboratory Manual is a very fine, and reasonably priced, introduction to the techniques of organic chemistry, and contains a large number of experiments suitable to the sophomore level Organic Chemistry course, with a number of experiments at an advanced level that would be a fine accompaniment to upper level undergraduate and beginning graduate courses in organic synthesis, green chemistry and polymer science. Microscale

techniques and experiments are included, as well as traditional methods. This book would be a valuable resource for any organic chemistry sequence.

Study Guide: Ace Organic Chemistry I - The EASY Guide to Ace Organic Chemistry I: (Organic Chemistry Study Guide, Organic Chemistry Review, Concepts, Reaction Mechanisms and Summaries) Experimental Organic Chemistry: A Miniscale & Microscale Approach (Cengage Learning Laboratory Series for Organic Chemistry) Experimental Organic Chemistry: Laboratory Manual A Microscale Approach to Organic Laboratory Techniques (Brooks/Cole Laboratory Series for Organic Chemistry) Safety-Scale Laboratory Experiments for Chemistry for Today (Brooks/Cole Laboratory Series for General, Organic, and Biochemistry) Safety-Scale Laboratory Experiments for Chemistry for Today (Cengage Laboratory Series for General, Organic, and Biochemistry) Exploring Chemistry Laboratory Experiments in General, Organic and Biological Chemistry (2nd Edition) Organic Homemade Lotion Recipes - For All Skin Types (The Best Lotion DIY Recipes): Lotion Making For Beginners (organic lawn care manual, organic skin care, beauty and the beast) Experimental Physical Chemistry: A Laboratory Textbook The Organic Chemistry of Drug Synthesis, Volume 3 (Organic Chemistry Series of Drug Synthesis) Laboratory Manual for General, Organic, and Biological Chemistry (3rd Edition) Organic Chemistry Laboratory Manual Laboratory Manual for General, Organic, and Biological Chemistry Experimental Organic Chemistry: Standard and Microscale Mosby's Manual of Diagnostic and Laboratory Tests, 4e (Mosby's Manual of Diagnostic & Laboratory Tests) A Manual of Laboratory and Diagnostic Tests (Manual of Laboratory & Diagnostic Tests) Manual of Microsurgery on the Laboratory Rat. Part 1: General Information and Experimental Techniques (Techniques in the Behavioral and Neural Science, 4) (Pt.1) Experimental Psychology (PSY 301 Introduction to Experimental Psychology) Experimental Structural Dynamics: An Introduction to Experimental Methods of Characterizing Vibrating Structures Experimental and Quasi-Experimental Designs for Generalized Causal Inference