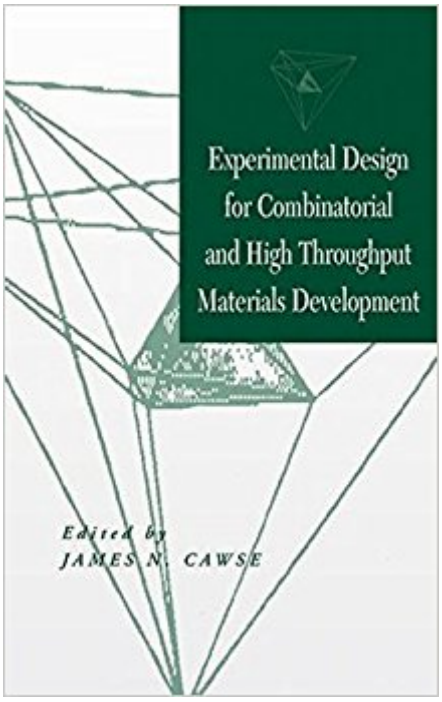
Experimental Design For Combinatorial And High Throughput Materials Development



Synopsis

In the past decade, combinatorial and high throughput experimental methods have revolutionized the pharmaceutical industry, allowing researchers to conduct more experiments in a week than was previously possible in a year. Now high throughput experimentation is rapidly spreading from its origins in the pharmaceutical world to larger industrial research establishments such as GE and DuPont, and even to smaller companies and universities. Consequently, researchers need to know the kinds of problems, desired outcomes, and appropriate patterns for these new strategies. Editor James Cawseâ ™s far-reaching study identifies and applies, with specific examples, these important new principles and techniques. Experimental Design for Combinatorial and High Throughput Materials Development progresses from methods that are now standard, such as gradient arrays, to mathematical developments that are breaking new ground. The former will be particularly useful to researchers entering the field, while the latter should inspire and challenge advanced practitioners. The bookâ ™s contents are contributed by leading researchers in their respective fields. Chapters include: -High Throughput Synthetic Approaches for the Investigation of Inorganic Phase Space -Combinatorial Mapping of Polymer Blends Phase Behavior -Split-Plot Designs -Artificial Neural Networks in Catalyst Development -The Monte Carlo Approach to Library Design and Redesign This book also contains over 200 useful charts and drawings. Industrial chemists, chemical engineers, materials scientists, and physicists working in combinatorial and high throughput chemistry will find James Cawseâ ™s study to be an invaluable resource.

Book Information

Hardcover: 338 pages
Publisher: Wiley-Interscience; 1 edition (December 17, 2002)
Language: English
ISBN-10: 0471203432
ISBN-13: 978-0471203438
Product Dimensions: 6.3 x 0.8 x 9.7 inches
Shipping Weight: 1.3 pounds (View shipping rates and policies)
Average Customer Review: 3.0 out of 5 stars 1 customer review
Best Sellers Rank: #3,345,548 in Books (See Top 100 in Books) #46 inÂ Books > Science & Math > Chemistry > Organic > Synthesis #2156 inÂ Books > Textbooks > Engineering > Chemical Engineering #3675 inÂ Books > Engineering & Transportation > Engineering > Materials & Material Science > Materials Science

Customer Reviews

"This book is a must for everybody interested in high-throughput experimentation." (Materials Today, October 2004) "This book represents a highly important contribution to the field of combinatorial materials researchâ |â • (Angewandte Chemie International Edition, August 13, 2004)

An invaluable reference to increasingly popular experimental methods In the past decade, combinatorial and high throughput experimental methods have revolutionized the pharmaceutical industry, allowing researchers to conduct more experiments in a week than was previously possible in a year. Now high throughput experimentation is rapidly spreading from its origins in the pharmaceutical world to larger industrial research establishments such as GE and DuPont, and even to smaller companies and universities. Consequently, researchers need to know the kinds of problems, desired outcomes, and appropriate patterns for these new strategies. Editor James Cawse's far-reaching study identifies and applies, with specific examples, these important new principles and techniques. Experimental Design for Combinatorial and High Throughput Materials Development progresses from methods that are now standard, such as gradient arrays, to mathematical developments that are breaking new ground. The former will be particularly useful to researchers entering the field, while the latter should inspire and challenge advanced practitioners. The book's contents are contributed by leading researchers in their respective fields. Chapters include: * High Throughput Synthetic Approaches for the Investigation of Inorganic Phase Space * Combinatorial Mapping of Polymer Blends Phase Behavior * Split-Plot Designs * Artificial Neural Networks in Catalyst Development * The Monte Carlo Approach to Library Design and Redesign The text also contains over 200 useful charts and drawings. Industrial chemists, chemical engineers, materials scientists, and physicists working in combinatorial and high throughput chemistry will find James Cawse's study to be an invaluable resource.

Very well crafted bread product that is friendly on the wrists and hands. Would recommend to others and purchase again. Great buy at this price. great, great, and very happy. a present , the best product, high quality and low price .

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Quasi-Experimental Designs for Generalized Causal Inference Experimental Psychology (PSY 301 Introduction to Experimental Psychology) Experimental Structural Dynamics: An Introduction to Experimental Methods of Characterizing Vibrating Structures Handbook of Combinatorial Chemistry: Drugs, Catalysts, Materials (2-Vol. Set) Engineering Materials 3: Materials Failure Analysis: Case Studies and Design Implications (International Series on Materials Science and Technology) (v. 3) High-Energy-Density Physics: Fundamentals, Inertial Fusion, and Experimental Astrophysics (Shock Wave and High Pressure Phenomena) Graphic Design Success: Over 100 Tips for Beginners in Graphic Design: Graphic Design Basics for Beginners, Save Time and Jump Start Your Success (graphic ... graphic design beginner, design skills) High Blood Pressure Cure: How To Lower Blood Pressure Naturally in 30 Days (Alternative Medicine, Natural Cures, Natural Remedies, High Blood Pressure ... Cures for High Blood Pressure, High Bl) Simulated Annealing and Boltzmann Machines: A Stochastic Approach to Combinatorial Optimization and Neural Computing The Cross-Entropy Method: A Unified Approach to Combinatorial Optimization, Monte-Carlo Simulation and Machine Learning (Information Science and Statistics) Combinatorial Optimization: Algorithms and Complexity (Dover Books on Computer Science) Discrete and Combinatorial Mathematics: An Applied Introduction (4th Edition) Discrete and Combinatorial Mathematics (Classic Version) (5th Edition) (Pearson Modern Classics for Advanced Mathematics Series) Discrete and Combinatorial Mathematics: An Applied Introduction, 5th Discrete and Combinatorial Mathematics: An Applied Introduction, Fifth Edition The Symmetric Group: Representations, Combinatorial Algorithms, and Symmetric Functions (Graduate Texts in Mathematics, Vol. 203) Combinatorial Group Theory: Presentations of Groups in Terms of Generators and Relations (Dover Books on Mathematics) Combinatorics: Set Systems, Hypergraphs, Families of Vectors and Combinatorial Probability