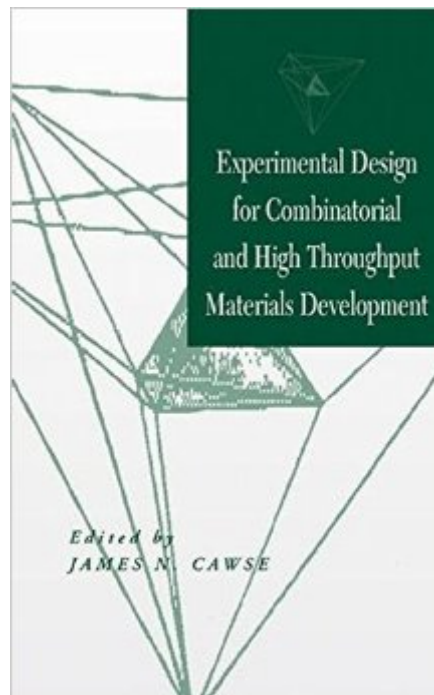# Experimental Design For Combinatorial And High Throughput Materials Development

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: Be the first to review this item

Best Sellers Rank: #3,433,415 in Books (See Top 100 in Books)   #64 inÂ Books > Science & Math > Chemistry > Organic > Synthesis   #2386 inÂ Books > Textbooks > Engineering > Chemical Engineering   #4755 inÂ Books > Engineering & Transportation > Engineering > Chemical

Experimental Design for Combinatorial and High Throughput Materials Development High Throughput Screening: Methods and Protocols (World's Best Reading) High Throughput Screening: Methods and Protocols (Methods in Molecular Biology) (Methods in Molecular Biology, 190) 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) Experimental Psychology (PSY 301 Introduction to Experimental Psychology) Algorithms: C++: Data Structures, Automation & Problem Solving, w/ Programming & Design (app design, app development, web development, web design, jquery, ... software engineering, r programming) 500 High Fiber Recipes: Fight Diabetes, High Cholesterol, High Blood Pressure, and Irritable Bowel Syndrome with Delicious Meals That Fill You Up and Help You Shed Pounds! Foods High in Fiber Cookbook: List of High Fiber Foods for a Healthy Lifestyle - Recipes for High Fiber Foods Analysis and Purification Methods in Combinatorial Chemistry (Chemical Analysis: A Series of Monographs on Analytical Chemistry and Its Applications) Combinatorial Optimization: Theory and Algorithms (Algorithms and Combinatorics) Geometric Algorithms and Combinatorial Optimization (Algorithms and Combinatorics) The Cross-Entropy Method: A Unified Approach to Combinatorial Optimization, Monte-Carlo Simulation and Machine Learning (Information Science and Statistics) Android: App Development & Programming Guide: Learn In A Day! (Android, Rails, Ruby Programming, App Development, Android App Development, Ruby Programming) Android: Programming & App Development For Beginners (Android, Rails, Ruby Programming, App Development, Android App Development) Personal Development: 5 Book Collection (Self Help, Personal Development, Self Development) Combinatorial systems (wheels) with guaranteed wins for pick-5 lotteries including Euromillions and the Mega lotteries The Symmetric Group: Representations, Combinatorial Algorithms, and Symmetric Functions (Graduate Texts in Mathematics, Vol. 203) Discrete and Combinatorial Mathematics: An Applied Introduction Discrete and Combinatorial Mathematics: An Applied Introduction, Fifth Edition Proofs that Really Count: The Art of Combinatorial Proof (Dolciani Mathematical Expositions)