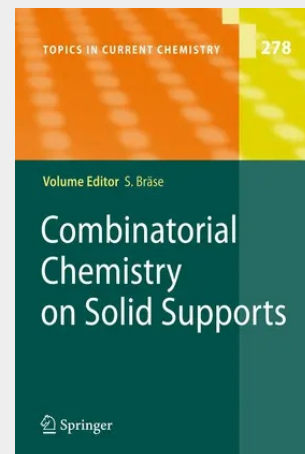


Combinatorial Chemistry on Solid Supports

The modern billion-dollar drug-discovery process strongly relies on both high-throughput synthesis and screening methods. Whereas the latter is based on molecular biological methods, the efficient and reliable generation of compound collections often makes use of combinatorial chemistry. Discovered in the 1980s, this methodology was explored extensively in the 1990s by groups in academia and in industry. Without any doubt, combinatorial chemistry changed the whole drug-discovery process and found many applications in crop science and the material sciences. However, since its implementation, solution- and solid-phase techniques have been competing with each other, and although many companies started their combinatorial chemistry program with solid-phase techniques, solution-phase combinatorial methods have taken over and now account for approximately 25% of all combinatorial efforts. The syntheses of complex, non-polymeric structures, discovered in the 1960s by the late Bruce Merrifield, was largely ignored in the context of solid supports, mainly due to the fact that appropriate synthesis techniques were not available. Since solid-phase chemical methodology strongly differs from traditional solution-phase chemistry, two chapters deal with this topic. The Bräse group (Jung, Wiehn, Bräse) gives an overview of multifunctional linkers, which can be used for the generation of diversity-oriented collections, simply by cleavage from resins. Still in its infancy, solid-phase reactions employ "simple" amide chemistry in most cases due to their high-yielding, reliable protocols. Ljungdahl, Merrifield, and Kann address solid-phase organometallic chemistry, which is now one of the great challenges in reliable solid-phase organic synthesis.

Presents critical reviews of the present position and future trends in modern chemical research. Short and concise reports on chemistry, each written by the world renowned experts. Still valid and useful after 5 or 10 years. More information as well as the electronic version of the whole content available at: springerlink.com



320,99 €

299,99 € (zzgl. MwSt.)

Lieferfrist: bis zu 10 Tage

Artikelnummer: 9783540725091

Medium: Buch

ISBN: 978-3-540-72509-1

Verlag: Springer Berlin Heidelberg

Erscheinungstermin: 20.07.2007

Sprache(n): Englisch

Auflage: 2007

Serie: Topics in Current Chemistry

Produktform: Gebunden

Gewicht: 729 g

Seiten: 360

Format (B x H): 160 x 241 mm

