The Pauson-Khand reaction is an important reaction in the field of organic chemistry. It involves the transition-metal catalysed cycloaddition of an alkyne, an alkene and carbon monoxide, to produce cyclopentenones. The importance of this reaction originates from its high value in transforming simple components into the synthetically useful cyclopentenone unit, in which a high degree of molecular complexity can be achieved in a single step, with impressive stereochemical and regiochemical control.

*The Pauson-Khand Reaction* investigates the nature and many variations of this reaction.

Topics covered include:

- the mechanisms of Pauson-Khand-type reactions
- non chiral intramolecular and intermolecular versions of Pauson-Khand reactions
- asymmetric Pauson-Khand reaction using chiral auxiliaries
- the enantioselective Pauson-Khand reaction
- Pauson-Khand reactions catalysed by metals other than cobalt
- unconventional Pauson-Khand reactions
- the Pauson-Khand reaction in total synthesis
Presenting a comprehensive overview of this fundamental reaction, *The Pauson-Khand Reaction* will find a place on the bookshelves of any organic or organometallic chemist.

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Ramon Rios Torres was born in 1974 in Barcelona. He obtained his PhD under the supervision of Professor Albert Moyano in 2000 at the University of Barcelona, and undertook postdoctoral work with Professor P. J. Walsh at Pennsylvania University, Professor Benjamin List at Max Plank Institute, Armando Cordova at Stockholm University and Professor Alvarez-Pez at Granada, and an industrial experience at J.C. Uriach (Spain). He received an ICREA position as independent researcher in 2008 at University of Barcelona. His research interests are devoted to the discovery of new asymmetric methodologies and their applications to organic synthesis. He is author or coauthor of more than 60 papers, 11 book chapters and 1 patent.

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