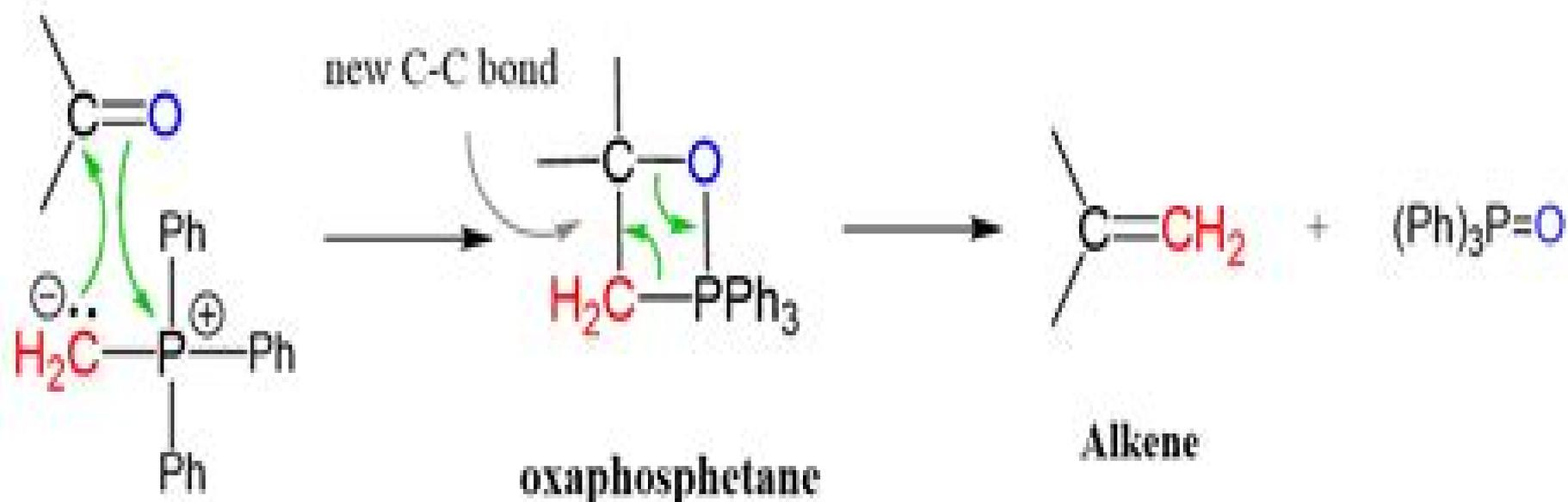


# The Mechanism of the Wittig Reaction



**Step 1.** Nucleophilic addition to  $\text{C}=\text{O}$  forming two bonds and in a four-membered ring.

**Step 2.** Fragmentation of oxaphosphetane by elimination of  $\text{Ph}_3\text{P}=\text{O}$  and the desired product alkene.

# The Wittig Reaction Experiment Analysis

**Charles M. Garner**



## **The Wittig Reaction Experiment Analysis:**

Modern Projects and Experiments in Organic Chemistry Jerry R. Mohrig, 2003 The Manuals Modern Projects and Experiments in Organic Chemistry helps instructors turn their organic chemistry laboratories into places of discovery and critical thinking In addition to traditional experiments the manual offers a variety of inquiry based experiments and multi week projects giving students a better understanding of how lab work is actually accomplished Instead of simply following directions students learn how to investigate the experimental process itself The only difference between the two versions of the manual is that each is tailor to specific laboratory equipment Content wise they are identical The Program Modern Projects and Experiments in Organic Chemistry is designed to provide the utmost in quality content student accessibility and instructor flexibility The project consists of 1 A laboratory manual in two versions miniscale and standard taper microscale equipment miniscale and Williamson microscale equipment 2 Custom publishing option All experiments are available through Freeman s custom publishing service at Freeman Custom Publishing Instructors can use this service to create their own customized lab manual even including they own material 3 Techniques of the Organic Chemistry Laboratory This concise yet comprehensive companion volume provides students with detailed descriptions of important techniques Comprehensive Organic Chemistry Experiments for the Laboratory Classroom Carlos A M Afonso, Nuno R Candeias, Dulce Pereira Simão, Alexandre F Trindade, Jaime A S Coelho, Bin Tan, Robert Franzén, 2020-08-28 This expansive and practical textbook contains organic chemistry experiments for teaching in the laboratory at the undergraduate level covering a range of functional group transformations and key organic reactions The editorial team have collected contributions from around the world and standardized them for publication Each experiment will explore a modern chemistry scenario such as sustainable chemistry application in the pharmaceutical industry catalysis and material sciences to name a few All the experiments will be complemented with a set of questions to challenge the students and a section for the instructors concerning the results obtained and advice on getting the best outcome from the experiment A section covering practical aspects with tips and advice for the instructors together with the results obtained in the laboratory by students has been compiled for each experiment Targeted at professors and lecturers in chemistry this useful text will provide up to date experiments putting the science into context for the students **Teaching Chemistry in Higher Education** Michael Seery, Claire Mc Donnell, 2019-07-01 Teaching Chemistry in Higher Education celebrates the contributions of Professor Tina Overton to the scholarship and practice of teaching and learning in chemistry education Leading educators in United Kingdom Ireland and Australia three countries where Tina has had enormous impact and influence have contributed chapters on innovative approaches that are well established in their own practice Each chapter introduces the key education literature underpinning the approach being described Rationales are discussed in the context of attributes and learning outcomes desirable in modern chemistry curricula True to Tina s personal philosophy chapters offer pragmatic and useful guidance on the

implementation of innovative teaching approaches drawing from the authors experience of their own practice and evaluations of their implementation Each chapter also offers key guidance points for implementation in readers own settings so as to maximise their adaptability Chapters are supplemented with further reading and supplementary materials on the book s website [overtonfestschrift.wordpress.com](http://overtonfestschrift.wordpress.com) Chapter topics include innovative approaches in facilitating group work problem solving context and problem based learning embedding transferable skills and laboratory education all themes relating to the scholarly interests of Professor Tina Overton About the Editors Michael Seery is Professor of Chemistry Education at the University of Edinburgh and is Editor of Chemistry Education Research and Practice Claire Mc Donnell is Assistant Head of School of Chemical and Pharmaceutical Sciences at Technological University Dublin Cover Art Christopher Armstrong University of Hull

Methodolotical and Mechanistic Studies of the Wittig Reaction Matthew John Peterson,1992

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*Microscale and Miniscale Organic Chemistry Laboratory Experiments* Allen M. Schoffstall,Barbara A. Gaddis,Melvin L. Druelinger,2000 This work offers a comprehensive introductory treatment of the organic laboratory techniques for handling glassware and equipment safety in the laboratory micro and mini scale experimental procedures theory of reactions and techniques applications and spectroscopy

Techniques and Experiments for Advanced Organic Laboratory Charles M. Garner,1997-01-02 This manual introduces advanced chemistry students to a variety of techniques which are used in research including the most useful instrumental analysis NMR capillary GC and GC MS Experiments illustrate the power of modern instrumentation particularly capillary GC and NMR Interesting experiments require students to perform detective work and in the Exploring Further sections students are encouraged to explore optional ideas for more in depth and independent studies

**Introduction to Organic Laboratory Techniques** Donald L. Pavia,2007 Resumen Taking an organic chemistry laboratory course You need a manual you can trust This proven laboratory manual gives you what you need to conduct a variety of interesting microscale experiments with safety and ease while you develop an understanding of the special techniques these type of experiments require The authors have increased the book s green approach giving you the clearly written information and instruction to conduct chemical experiments in a more environmentally friendly way Many of the book s experiments have been modified to use new techniques and reduce the use of hazardous solvents and reagents You ll find fascinating essays that add real life

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**Macroscale and Microscale Organic Experiments** Kenneth L. Williamson,1994 This flexible accurate manual includes both macroscale and microscale procedures for each experiment The level and writing style of the text which emphasizes biochemical and biomedical applications make it ideally suited for the mainstream organic chemistry laboratory A student CD ROM includes videos and photos related to the material in the text Videos feature the exact glassware required for each experiment and demonstrate techniques for how to conduct experiments successfully and safely Photos show lab equipment set ups In this Experiment is a new feature that appears before every microscale experiment It presents the objective of the experiment and keeps students from getting bogged down in the minute details of experimental procedures An instructor web site provides a forum where instructors can communicate directly with the text author about specific experiments and the implementation of microscale techniques The site also includes PDF files from the Instructor s Resource Manual

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