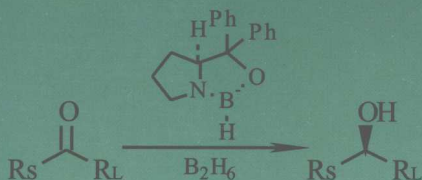
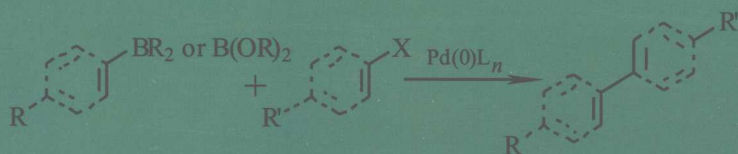


荣国斌 马汝建 编

有机成名反应、试剂和缩略词

NAMED REACTIONS, REAGENTS AND ABBREVIATIONS



Danishefsky diene

Mosher's ester

Wilkinson catalyst

Belleau's reagent

Fremy salt

DABN

KS-Selectride



华东理工大学出版社
EAST CHINA UNIVERSITY OF SCIENCE AND TECHNOLOGY PRESS

有机成名反应、试剂和缩略词

荣国斌 马汝建 编



华东理工大学出版社
EAST CHINA UNIVERSITY OF SCIENCE AND TECHNOLOGY PRESS

图书在版编目(CIP)数据

有机成名反应、试剂和缩略词/荣国斌,马汝建 编.

—上海:华东理工大学出版社,2008.8

ISBN 978-7-5628-2302-5

I. 有... II. ①荣... ②马... III. 有机化学-化学反应-缩略语-汉、英 IV. O621.25

中国版本图书馆 CIP 数据核字(2008)第 062278 号

有机成名反应、试剂和缩略词

荣国斌 马汝建 编

责任编辑/陈新征

责任校对/金慧娟

封面设计/王晓迪

出版发行/华东理工大学出版社

地 址:上海市梅陇路 130 号,200237

电 话:(021)64250306(营销部)

传 真:(021)64252707

网 址:www.hdlgpress.com.cn

印 刷/上海长阳印刷厂

开 本/787mm×1092mm 1/16

印 张/30.75

字 数/619 千字

版 次/2008 年 9 月第 1 版

印 次/2008 年 9 月第 1 次

印 数/1-4050 册

书 号/ISBN 978-7-5628-2302-5/O·193

定 价/68.00 元

(本书如有印装质量问题,请到出版社营销部调换)

前 言

有机化学在某种程度上是一个高度依赖于个人创造力的特色学科。绝大部分属于人名反应和人名试剂的有机成名反应、试剂及缩略语既是有机化学学科的一大特色,又处于有机反应的核心地位,而在教科书和科研论文中被广为使用。现代有机化学在 19 世纪开始发展起来后,成名反应、试剂及缩略语也就随之产生并一直在不断增加。一个反应和试剂能否冠以成名或缩略语并无定论和严格的标准,但通常是与它的重要性、新颖性及应用上的广泛性密切相关的,成名也主要依据发现者,或有重要贡献者,或反应的特点而给出。绝大部分成名反应、试剂是人名反应和人名试剂,其中有不少冠名者获得过诺贝尔奖,也有少数是公司名或地名。迄今为止,尽管难以确切统计,大概有上千个成名反应和试剂曾被提及或应用过,为人们广为熟知的也有几百个。有些成名反应和成名试剂随着时间的推移因各种原因而失去应用价值后逐渐被人们所淡忘,有些则由于后人的改进工作而更趋完善,所冠的成名也有变化或增加。缩略语的应用则相对随意性稍大一点。毫无疑问的是,要学好有机化学,熟悉成名反应、试剂及缩略语是一个基本要求;要做好有机化学,掌握更多的成名反应、试剂及缩略语就是一个素质要求了。

本书精选了 800 个有机成名反应和 270 多个成名试剂及 2300 余条缩略语,并给出相关文献 5400 多篇。选材的主要依据就是看这些条目是否有新颖性和应用价值,或者说现时是否仍然经常出现在教科书和科研论文中而被人们提及和应用。也有的是属于编者认为有较大影响的新进展反应,如 Rabe-Kindler Conversion of *d*-Quinotoxine Into Quinine (奎尼辛到奎宁的合成)反应历经近百年,从肯定到怀疑否定再在 2008 年得到实验证明就是一个很有必要予以记载的成名反应。在编写上,对反应的每个条目都给出有实质内容中英文对照的名称、代表性的反应方程式、尽可能齐全的综述性论文及近期至 2008 年 6 月的代表性研究论文、对试剂条目则给出中英文对照的全名、完整的结构式和附有制备实验的代表性论文。读者如果需要对反应的机理、操作程序、应用的范围和扩展等信息有进一步了解的话,可以很方便地从每个条目下的这些参考文献中去获取。对缩略语的每个条目则分别给出完整中英文对照的名称和结构式。

药明康德新药开发有限公司的张索娜、吴士敏等参与了初稿的核对和部分增订工作。

希望本书能成为我国的有机化学工作者和学习者身边不可或缺的一本工具参考书,也敬盼读者能提出宝贵意见,以利重版时修订。

荣国斌(华东理工大学,上海 200237; ronggb@ecust.edu.cn)

马汝建(药明康德新药开发有限公司,上海 200131; marj@pharmatechs.com)

内 容 提 要

本书精选了 800 个有机成名反应和 270 多个成名试剂及 2300 余条缩略语和 5400 多篇相关参考文献。对反应的每个条目都给出有实质内容的中英文对照的名称、代表性的反应方程式和尽可能齐全的综述性论文及近期至 2008 年 6 月的代表性研究论文；对试剂条目则给出中英文对照的全名、完整的结构式和附有制备实验的代表性论文；对缩略语的每个条目则分别给出完整的中英文对照的名称和结构式。书后有成名索引、主题索引和有机化学学科重要期刊缩写索引。

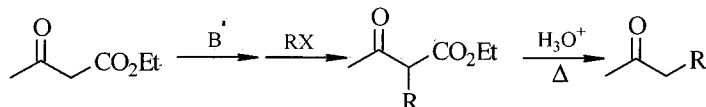
本书作为一种专业辞书类工具书,可供有机化学及相关领域的科研工作者和大专院校相关专业的师生参考使用。

目 录

成名反应 Named Reactions	(1)
成名试剂 Named Reagents and Acronyms	(277)
缩略词 Abbreviations	(309)
成名索引	(459)
主题索引	(476)
有机化学学科常用期刊及其缩写	(483)

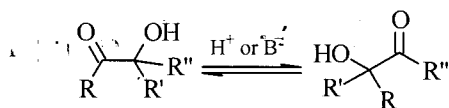
1. 成名反应 Named Reactions

• Acetoacetic ester synthesis 乙酰乙酸乙酯法合成



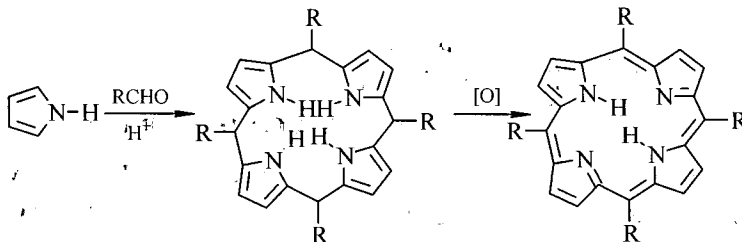
C. S. Marvel, F. D. Hager; *Org. Synth.* **1941**, *1*:248; C. R. Hauser, B. E. Hudson Jr.; *Org. React.* **1942**, *1*:266; S. N. Huckin, L. Weiler; *J. Amer. Chem. Soc.* **1974**, *96*:1082; K. Mori; *Tetrahedron* **1974**, *30*:4223; A. P. Krapcho; *Synthesis* **1982**, 805, 893; B. Lygo; *Synlett* **1993**, 764; S. Benetti, R. Romagnoli, C. de Risi, G. Spalluto, V. Zanirato; *Chem. Rev.* **1995**, 1065; K. A. Parker, L. Resnik; *J. Org. Chem.* **1995**, *60*:5726; Y. -Q. Lu, C. -J. Li; *Tetrahedron Lett.* **1996**, *37*:471.

• Acyloin rearrangement 偶姻重排反应



M. Rentzea, E. Hecker; *Tetrahedron Lett.* **1982**, *23*:1785; T. Sate, T. Nagata, K. Maeda, S. Ohtsuka; *Tetrahedron Lett.* **1994**, *35*:5027; J. Liu, N. Mander, A. C. Willis; *Tetrahedron* **1998**, *54*:11637.

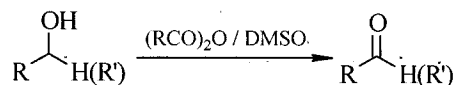
• Adler-Lindsey synthesis of porphyrinogens and porphyrins 卟啉合成



A. D. Adler, F. R. Longo, W. J. Shergalis; *J. Amer. Chem. Soc.* **1964**, *86*:3145; J. S. Lindsey, I. C. Schreiman, H. C. Hsu, P. C. Kearney, A. M. Marguerettaz; *J. Org. Chem.* **1987**, *52*:827; A. R. Battersby; *Pure Appl. Chem.* **1989**, *61*:337;

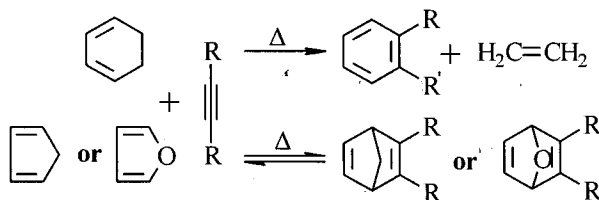
J. L. Sessler, A. Mozaffari, M. R. Johnson; *Org. Synth.* **1992**, 70:68; M. G. Warner, G. L. Succaw, J. E. Hutchison; *Green Chem.* **2001**, 267; 石伟民, 陶京朝, 吴健; *化学通报* **2005**, 751; W. G. O'Neal, P. A. Jacobi; *J. Amer. Chem. Soc.* **2008**, 130:1102; I. Saltsman, Z. Gross; *Tetrahedron Lett.* **2008**, 49:247.

• **Albright-Goldman oxidation of alcohol 醇氧化反应**



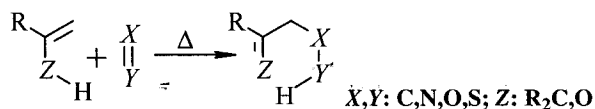
J. D. Albright, L. Goldman; *J. Amer. Chem. Soc.* **1967**, 89:2416; T. T. Tidwell; *Org. React.* **1990**, 39:3; S. Obika, Y. Takashima, Y. Matsumoto, K. Kuromaru, T. Imanishi; *Tetrahedron Lett.* **1995**, 36:8617.

• **Alder-Rickert aromatization rule of reverse D-A reaction 逆 D-A 反应的芳构化规则**



A. C. Cope, A. C. Haven, Jr., F. L. Ramp, E. R. Trumbull; *J. Amer. Chem. Soc.* **1952**, 74:4867; M. E. Jung, L. J. Street; *J. Amer. Chem. Soc.* **1984**, 106:8327; R. N. Warrenner, J.-M. Wang, K. D. V. Weerasuria, R. A. Russell; *Tetrahedron Lett.* **1990**, 31:7609.

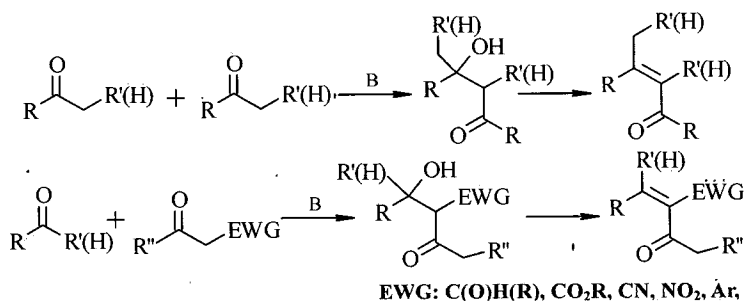
• **Alder-Schenck Ene reaction 烯反应**



W. Oppolzer, V. Snieckus; *Angew. Chem., Int. Ed. Engl.* **1978**, 17:476; W. Oppolzer; *Pure Appl. Chem.* **1981**, 53:1181; J. Dubac, A. Lapoterie; *Chem. Rev.* **1987**, 87:319; K. Kikami, M. Schimizu; *Chem. Rev.* **1992**, 92:1021; K. Kikami, M. Terada, S. Narisawa, T. Nakai; *Synlett* **1992**, 255; R. M. Borziller, S. M. Weinreb; *Synthesis* **1995**, 347; M. Prein, W. Adam; *Angew. Chem., Int. Ed. Engl.* **1996**, 35:477; T. W.

Mackewitz, M. Regitz; *Synthesis* **1998**, 125; J.-H. Zhang, M.-X. Wang, Z.-T. Huang; *Tetrahedron Lett.* **1998**, 39: 9237; J. S. Johnson, D. A. Evans; *Acc. Chem. Res.* **2000**, 33: 325; M. Stratakis, M. Orfanopoulos; *Tetrahedron* **2000**, 56: 1595; A. G. Leach, K. N. Houk; *Chem. Commun.* **2002**, 1243; W. Adam, O. Krebs; *Chem. Rev.* **2003**, 103: 4131; K. Mikami, Y. Kawakami, K. Akiyama, K. Aikawa; *J. Amer. Chem. Soc.* **2007**, 129: 12950; G. E. Hutson, A. H. Dave, V. H. Rawal; *Org. Lett.* **2007**, 9: 3869; A. A. Fokin, A. G. Yurchenko, V. N. Rodionov, P. A. Gunchenko, R. I. Yurchenko, A. Reichenberg, J. Wiesner, M. Hintz, H. Jomaa, P. R. Schreiner; *Org. Lett.* **2007**, 9: 4379; P. H.-Y. Cheong, P. Mogamelli, M. R. Luzung, K. N. Houk, F. D. Toste; *J. Amer. Chem. Soc.* **2008**, 130: 4517; G. Triola, L. Brunsfeld, H. Waldmann; *J. Org. Chem.* **2008**, 73: 3646.

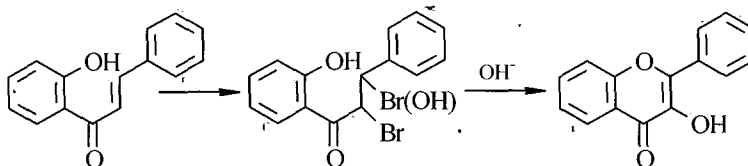
• Aldol condensation 醇醛缩合反应



A. T. Nielsen, W. J. Houlihan; *Org. React.* **1968**, 16: 1; T. Mukaiyama; *Org. React.* **1982**, 28: 203; T. Mukaiyama, S. Kobayashi; *Org. React.* **1994**, 46: 1; S. Takayama, G. J. Mcgarvey, C.-H. Wong; *Chem. Soc. Rev.* **1997**, 26: 407; C. J. Cowden, I. Patterson; *Org. React.* **1997**, 51: 1; S. G. Nelson; *Tetrahedron: Asymmetry* **1998**, 9: 357; R. Nahrwald; *Chem. Rev.* **1999**, 99: 1095; S. E. Denmark, R. A. Stavenger; *Acc. Chem. Res.* **2000**, 33: 432; T. D. Machajewski, C.-H. Wong, R. A. Lemer; *Angew. Chem., Int. Ed.* **2000**, 39: 1352; G. Casiraghi, F. Zanardi, G. Appendino, G. Rassu; *Chem. Rev.* **2000**, 100: 1929; B. Alkaide, P. Almendros; *Eur. J. Org. Chem.* **2002**, 1595; Z. B. Luo, L. X. Dai; *Chemtracts* **2003**, 16: 843; Z. Tang, F. Jiang, L. T. Yu, X. Cui, L. Z. Gong, A. Q. Mi; *J. Amer. Chem. Soc.* **2003**, 125: 5262; A. Abiko; *Acc. Chem. Res.* **2004**, 37: 387; S. Saito, H. Yamamoto; *Acc. Chem. Res.* **2004**, 37: 570; C. Palomo, M. Oiarbide, J. M. Garcia; *Chem. Soc. Rev.* **2004**, 33: 65; L. Wang, J. Sheng, H. Tian; *Synthesis* **2004**, 3060; J. I. Vicarion, D. Badia, L. Carillo, E. Reyes, J. Extebarria; *Curr. Org. Chem.* **2005**, 9: 219; Z. Tang, Z.-H. Yang, X.-H. Chen, L.-F. Cun, A.-Q. Mi, Y.-Z. Jiang, L.-Z. Gong; *J. Amer.*

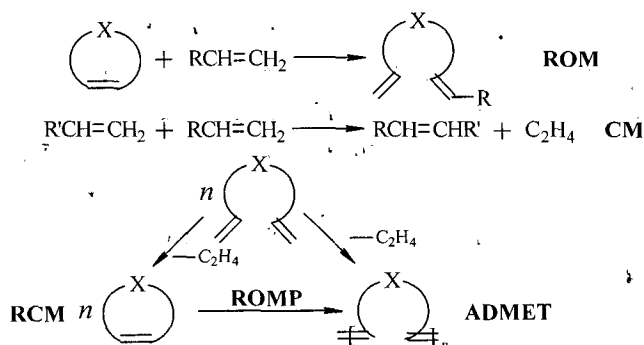
Chem. Soc. **2005**, 127: 9285; Q. Gu, X.-F. Wang, L. Wang, X. Y. Wu, Q. L. Zhou; *Tetrahedron: Asymmetry* **2006**, 17: 1537; 姜丽娟, 张兆国; *有机化学* **2006**, 26: 618; Z. Tang, A. Marx; *Angew. Chem., Int. Ed.* **2007**, 46: 7297; M. P. Sibi; S. Năd; *Angew. Chem., Int. Ed.* **2007**, 46: 9231; X.-Y. Xu, Z. Tang, Y.-Z. Wang, S.-W. Luo, L.-F. Cun, L.-Z. Gong; *J. Org. Chem.* **2007**, 72: 9905; X.-Y. Xu, Y.-Z. Wang, L.-Z. Gong; *Org. Lett.* **2007**, 9: 4247; G.-N. Ma, Y.-P. Zhang, M. Shi; *Synthesis* **2007**, 197; G. Zhou, J. M. Yost, D. M. Coltart; *Synthesis* **2007**, 478; S. S.-Mosse, M. Laars, K. Kriis; T. Kanger, A. Alexakis; *Synthesis* **2007**, 1729; S. Sathapornvijana, T. Vilaivan; *Tetrahedron* **2007**, 63: 10253; J.-R. Chen, X.-P. Liu, X.-Y. Zhu, L. Li, Y.-F. Qiao, J.-M. Zhang, W.-J. Xiao; *Tetrahedron* **2007**, 63: 10437; Y. Hayashi, T. Itoh, S. Aratake, H. Ishikawa; *Angew. Chem., Int. Ed.* **2008**, 47: 2082; B. Schetter, B. Ziemer, G. Schnakenburg, R. Mahrwald; *J. Org. Chem.* **2008**, 73: 813; R. S. Paton, J. M. Goodman; *J. Org. Chem.* **2008**, 73: 2513; H. Inoue, M. Kikuchi, J.-I. Ito, H. Nishiyama; *Tetrahedron* **2008**, 64: 493; K. Murakami, H. Ohmiya, H. Yoriuitsu, K. Oshima; *Tetrahedron Lett.* **2008**, 49: 2388; J.-F. Zhao, L. He, J. Jiang, Z. Tang, L.-F. Cai, L.-Z. Gong; *Tetrahedron Lett.* **2008**, 49: 3372.

• **Algar-Flynn-Oyamada-Rosoda flavone synthesis 黄酮合成反应**



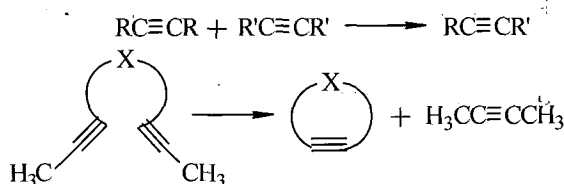
M. G. Marathe; *J. Org. Chem.* **1955**, 20: 563; T. M. Gormley, W. I. O'Sullivan; *Tetrahedron* **1973**, 29: 369; A. C. Jain, S. M. Gupta, A. Sharma; *Bull. Chem. Soc. Jpn.* **1983**, 56: 1267; N. De Meyer, A. M. L. Haemers, H.-K. Pandey, L. A. C. Pieters; *J. Med. Chem.* **1991**, 34: 736; J. R. Dharia, K. F. Johnson, J. B. Schlenof; *Macromolecules* **1994**, 27: 5167; M. Bennett, A. J. Burke, W. I. O'Sullivan; *Tetrahedron* **1996**, 52: 7163; C. J. Bennett, S. T. Caldwell, D. B. Mcphail, P. C. Morrice, G. G. Duthie, R. C. Hartley; *Bioorg. Med. Chem.* **2004**, 12: 2079.

• **Alkene metathesis 烯烃复分解(歧化、换位)反应**



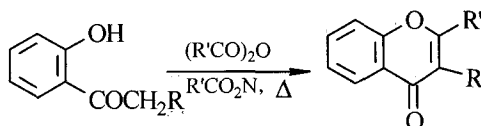
R. H. Grubbs; *J. Organomet. Chem. Libr.* **1976**, 1:423; R. H. Grubbs; *Prog. Inorg. Chem.* **1978**, 24: 1; R. H. Grubbs, W. Tumas; *Science* **1989**, 243: 907; R. H. Grubbs, S. J. Miller, G. C. Fu; *Acc. Chem. Res.* **1995**, 28:446; M. Schuster, S. Blechert; *Angew. Chem., Int. Ed. Engl.* **1997**, 36: 2037; R. H. Grubbs, S. Chang; *Tetrahedron* **1998**, 54:4413; R. R. Schrock; *Tetrahedron* **1999**, 55:8141; A. Fustner; *Angew. Chem., Int. Ed.* **2000**, 39:3012; T. M. Trnka, R. H. Grubbs; *Acc. Chem. Res.* **2001**, 34: 18; S. J. Connon, S. Blechert; *Angew. Chem., Int. Ed.* **2003**, 42: 1900; R. R. Schrock, A. H. Hoveyda; *Angew. Chem., Int. Ed.* **2003**, 42:4592; A. Deiters, S. F. Martin; *Chem. Rev.* **2004**, 104: 2199; M. D. McReynolds, J. M. Dougherty, P. R. Hanson; *Chem. Rev.* **2004**, 104: 2239; R. H. Grubbs; *Tetrahedron* **2004**, 60: 7117; 郭盈岑, 肖文精; *有机化学* **2005**, 25: 1334; H. Clavier, K. Grela, A. Kirschning, M. Mauduit, S. P. Nolan; *Angew. Chem., Int. Ed.* **2007**, 46: 6786; L. R. Drozdak, B. Alleert, A. Linden, P. Van der Voort, F. Verpoort; *Dalton Trans.* **2007**, 5201; I. A. Gorodetskaya, T. -L. Choi, R. H. Grubbs; *J. Amer. Chem. Soc.* **2007**, 129: 12672; S. J. P'Pool, H. -J. Schanz; *J. Amer. Chem. Soc.* **2007**, 129: 14200; I. C. Stewart, C. J. Douglas, R. H. Grubbs; *Org. Lett.* **2008**, 10: 441; S. Rotzoll, H. Gols, P. Langer; *Synthesis* **2008**, 45; V. Sol, V. Chaleix, R. Granet, P. Krausz; *Tetrahedron* **2008**, 64: 364; S. Maity, S. Ghosh; *Tetrahedron Lett.* **2008**, 49:1133.

• Alkyne metathesis 炔烃复分解(歧化、换位)反应



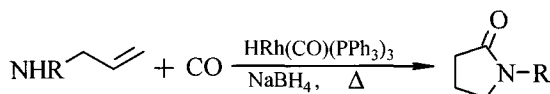
A. Mortrex, M. Blanchard; *J. Chem. Soc., Chem. Commun.* **1974**, 786; L. G. McCullough, R. R. Schrock; *J. Amer. Chem. Soc.* **1984**, 106: 4067; T. S. -Buzar; *Coord. Chem. Rev.* **1997**, 159: 205; U. H. F. Bunz, L. Kloppenburg; *Angew. Chem., Int. Ed.* **1999**, 38: 478; U. H. F. Bunz; *Acc. Chem. Res.* **2001**, 34: 998; G. Brizius, U. H. F. Bunz; *Org. Lett.* **2002**, 4: 2829; S. Beer, C. G. Hrib, P. G. Jones, K. Brandhorst, J. Grunenber, M. Tamm; *Angew. Chem., Int. Ed.* **2007**, 46: 8890; E. Groaz, D. Banti, M. North; *Tetrahedron* **2008**, 64: 204.

• **Allan-Kostanecki-Robinson chromone synthesis** 色酮合成反应



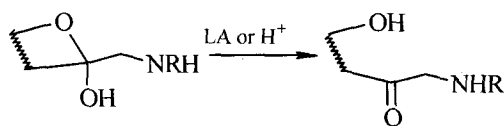
S. M. Sethua, N. M. Shah; *Chem. Rev.* **1945**, 36: 8; C. R. Houser, F. W. Swamer, J. T. Adams; *Org. React.* **1954**, 8: 90; D. N. Shah, N. M. Shah; *J. Amer. Chem. Soc.* **1955**, 77: 1699; T. Szell; *J. Chem. Soc. (C)* **1967**: 2041; J. L. Bose, R. C. Shah; *Indian J. Chem.* **1973**, 11: 729; P. R. Iyer, C. S. R. Yer, K. J. R. Prasad; *Indian J. Chem.* **1983**, 22B: 1055; S. Yamaguchi, M. Mutoh, M. Schimakura, K. Tsuzuki, Y. Kawasa; *J. Heterocycl. Chem.* **1991**, 28: 119; K. S. Rehde, J. A. Kepler; *Synth. Commun.* **1996**, 26: 4005; E. J. Corey; *Tetrahedron Lett.* **1996**, 37: 7162; C. K. Ghosh, S. Bhattacharyya, C. Ghosh, A. Patra; *J. Chem. Soc., Perkin Trans. I* **1999**: 3005; V. Rossollin, V. Lokshin, A. Samat, R. Gugliemetti; *Tetrahedron* **2003**, 59: 7725; D. S. Clarke, C. D. Gabbutt, J. D. Hepworth, B. M. Heron; *Tetrahedron Lett.* **2005**, 46: 5515.

• **Alper carbonylation of alkenes** 烯炔羰基化反应



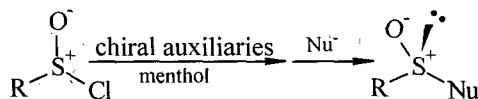
H. Alper; *Aldrichimica Acta* **1991**, 24: 3; J. -Q. Zhou, H. Alper; *J. Org. Chem.* **1992**, 57: 3328; P. G. Reddy, D. K. Kumar, S. Baskaran; *Tetrahedron* **2000**, 41: 9149.

• **Amadori glucosamine rearrangement** 葡糖胺重排反应



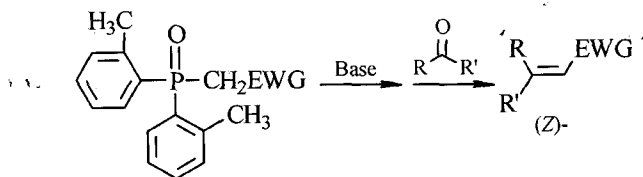
J. E. Hodges; *Adv. Carbohydrate Chem.* **1955**, 10:169; G. Fodor, J. P. Sachetto; *Tetrahedron lett.* **1968**, 401; T. J. Guzi, T. L. Macdonald; *Tetrahedron lett.* **1996**, 37:2939; S. Harvat, M. Roscic, L. V. Defterdarovic, J. Harvat; *J. Chem. Soc., Perkin Trans. I* **1998**:909; R. G. Khalifah, J. W. Baynes, B. G. Hudson; *Biochem. Biophys. Res. Commun.* **1999**, 257:51.

• **Andersen asymmetric sulfoxide synthesis** 不对称亚砷合成反应



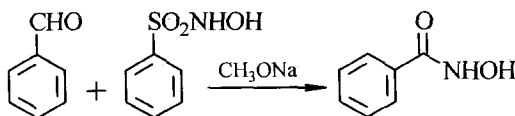
K. K. Andersen; *Tetrahedron Lett.* **1962**, 3:93; P. Bickart, M. Axelrod, J. Jacobus, K. Mislow; *J. Amer. Chem. Soc.* **1967**, 89:697; H. Kosugi, O. Kanno, H. Uda; *Tetrahedron: Asymmetry* **1994**, 5:1139; R. R. Strickler, A. L. Schwan; *Tetrahedron: Asymmetry* **1999**, 10:4065.

• **Ando-HWE (Z)-alkene synthesis** (Z)-烯烃合成反应



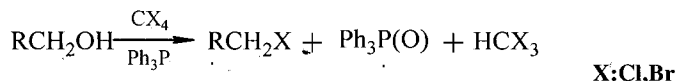
K. Ando; *J. Org. Chem.* **1998**, 63:8411; R. P. Singh, V. K. Singh; *J. Org. Chem.* **2004**, 69:3425.

• **Angeli-Rimini hydroxamic acid synthesis** 羟肟酸合成反应



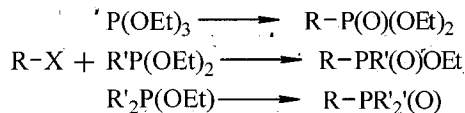
H. L. Yale; *Chem. Rev.* **1943**, 33:209; T. Ozawa, S. Aoyagi, C. Kibayashi; *J. Org. Chem.* **2001**, 66:3338; K. Ohmoto, T. Yamamoto, T. Horiuchi, T. Kojima, K. Hachiya, S. Hashimoto, M. Kawamura, H. Nakai; *Synlett* **2001**, 299.

• Appel halide synthesis 卤代烃合成反应



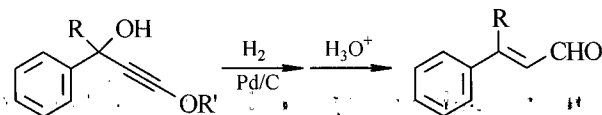
R. Appel; *Angew. Chem., Int. Ed. Engl.* **1975**, 14:801; J. D. Slagle, T. T. Huang, B. Franzus; *J. Org. Chem.* **1981**, 46:3526; J. Baraniak, W. J. Stec; *Tetrahedron Lett.* **1985**, 26:4379; M. Dubber, T. K. Lindhorst; *Org. Lett.* **2001**, 3:4019; L. Desmaris, N. Percina, L. Cottier, D. Sinou; *Tetrahedron Lett.* **2003**, 44:7589.

• Arbuzov phosphonate synthesis 膦酸酯合成反应



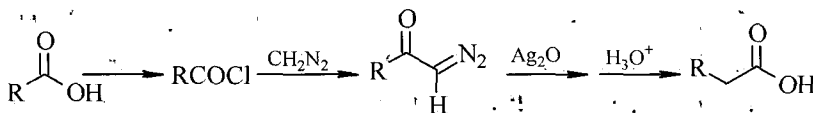
G. M. Kosolapoff; *Org. React.* **1951**, 6:273; B. A. Arbuzov; *Pure Appl. Chem.* **1964**, 9:307; S. Swaminathan, K. V. Narayanan; *Chem. Rev.* **1971**, 71:429; A. K. Bhattacharya, G. Thyagarajan; *Chem. Rev.* **1981**, 81:415; T. B. Brill, S. J. Landon; *Chem. Rev.* **1984**, 84:577; R. Waschbusch, J. Carran, A. Marinetti, P. Savignac; *Synthesis* **1997**, 727; R. A. Cherkasov, N. A. Peolezhaeva, V. I. Galkin; *Phosphorus, Sulfur Silicon Relat. Elem.* **1999**, 144-146:333; J.-C. Jung, R. V. Kache, K. Kimberly, Y.-S. Zheng, P. Bijoy, M. Valluri, M. A. Avery; *J. Org. Chem.* **2004**, 69:9269; M. Piekutowska, Z. Pakulski; *Tetrahedron Lett.* **2007**, 48:8482.

• Arens-van Dorp cinnamaldehyde synthesis 肉桂醛合成反应



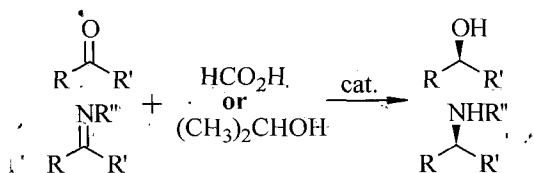
J. F. Arens, D. A. van Dorp; *Rec. Trav. Chim. Pays-Bas* **1948**, 67:973; E. R. H. Jones, G. Eglinton, M. C. Whiting, B. L. Shaw; *Org. Synth. Coll. Vol. IV* **1963**, 404.

• Arndt-Eistert homologation reaction 同系增碳反应



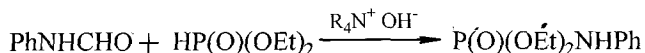
W. E. Bachmann, W. S. Struve; *Org. React.* **1942**, *1*:38; H. Meier, K. Zeller; *Angew. Chem., Int. Ed. Engl.* **1975**, *14*:32; J. R. Young, S. X. Huang, I. Chen, T. F. Walsh, V. De, J. Robert; M. J. Wyvrat, M. T. Goulet, N. Ren, J. Lo, Y. T. Yang, J. B. Yudkowitz; *Bioorg. Med. Chem. Lett.* **2000**, *10*:1723; W. Kirmse; *Eur. J. Org. Chem.* **2002**:2193; R. A. Farlow, D. A. Thamatloor, R. B. Sunoj, C. M. Hadad; *J. Org. Chem.* **2002**:67:3257; G. R. Vasanthakumar, V. V. S. Babu; *Synth. Commun.* **2002**, *32*:651; D. Gray, C. Concello, T. Gallagher; *J. Org. Chem.* **2004**, *69*:4849; 廖本仁, 洪镛裕, 徐军, 刘波; *有机化学* **2004**, *24*:63.

• **Asymmetric transfer hydrogenation 不对称转移氢化**



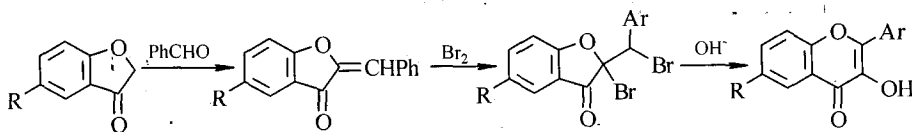
G. Zassinovichi, G. Mestroni, S. Gladiali; *Chem. Rev.* **1992**, *92*:1051; N. Uematsu, A. Fujii, S. Hashiguchi, T. Ikariya, R. Noyori; *J. Amer. Chem. Soc.* **1996**, *118*:4916; J. Takehara, S. Hashiguchi, A. Fujii, S. Inoue, T. Ikariya, R. Noyori; *J. Chem. Soc. Chem. Commun.* **1996**:233; S. Gladiali, E. Alberico; *Chem. Soc. Rev.* **2006**, *35*:218.

• **Atherton-Tood phosphoramidate synthesis 磷酰胺合成反应**



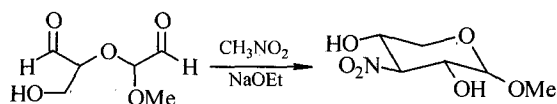
L. K. Lukanow, A. P. Venkov, N. M. Mollov; *Synthesis* **1985**, 971; S. Z. Zhu, J. Zhang, B. Bin, C. Y. Qin; *Org. Prep. Proced. Int.* **1997**, *29*:352; 赵玉芬, 韩波, 罗施中, 李艳梅, 赵刚; *高等学校化学学报* **2001**, *22*:2304.

• **Auwers chromone synthesis 色酮合成反应**



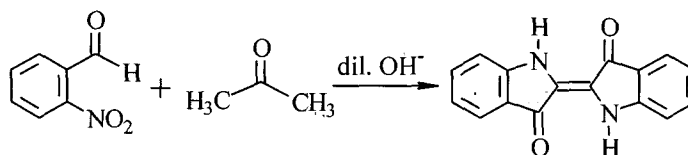
H. F. Dean, M. Nierenstein; *J. Amer. Chem. Soc.* **1925**, 47:1676; B. H. Ingham, H. Stephen, R. Timpe; *J. Chem. Soc.* **1931**, 895; B. G. Acharya, R. C. Shah, T. S. Wheeler; *J. Chem. Soc.* **1940**, 817; C. W. Bird, R. C. Cookson; *J. Org. Chem.* **1959**, 24:441.

• **Baer-Fischer amino sugar synthesis** 氨基糖合成反应



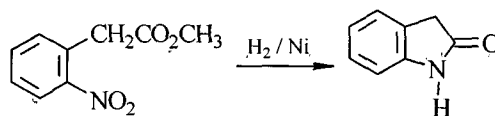
H. H. Baer; *Pure Appl. Chem.* **1989**, 61:1217.

• **Baeyer-Drewson indigo synthesis** 靛蓝合成反应



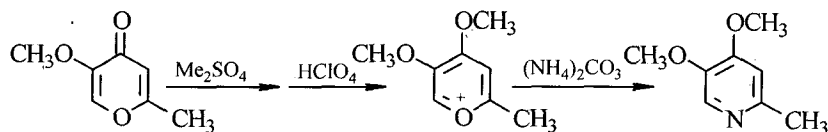
J. R. McKee, M. Zanger; *J. Chem. Educ.* **1991**, 68:A242; S. L. Poe, M. A. Cummings, M. P. Haaf, D. T. McQuade; *Angew. Chem., Int. Ed.* **2006**, 45:1544.

• **Baeyer oxindole synthesis** 羟吲哚合成反应



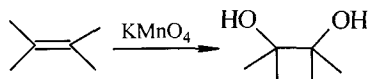
D. A. Walsh, D. A. Shamblee, W. J. Welstead Jr., L. F. Sancilio; *J. Med. Chem.* **1982**, 25:446; T. H. Fife, N. W. Duddy; *J. Amer. Chem. Soc.* **1983**, 105:74; W. Flitsch, P. Russkamp; *Liebigs Ann. Chem.* **1985**, 7:1398; T. V. Rajanbabu, B. L. Chenard, M. A. Petti; *J. Org. Chem.* **1986**, 51:7041.

• **Baeyer pyridine synthesis** 吡啶合成反应



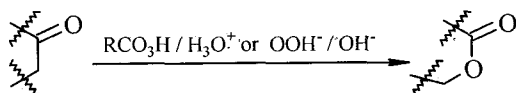
L. F. Cavalieri; *Chem. Rev.* **1947**, 41: 525; K. N. Campbell, J. F. Ackerman, B. K. Campbell; *J. Org. Chem.* **1950**, 15: 221.

• **Baeyer test for double bonds 双键测试反应**



A. J. Fatiadi; *Synthesis* **1987**, 85: 86; D. J. Nelson, R. L. Henley; *Tetrahedron Lett.* **1995**, 36: 6375.

• **Baeyer-Villiger oxidation of ketone 醛酮氧化反应**



C. H. Hassall; *Org. React.* **1957**, 9: 73; G. R. Krow; *Tetrahedron* **1981**, 37: 2697; M. J. Taschner, D. J. Black; *J. Amer. Chem. Soc.* **1988**, 110: 6892; L. Syper; *Synthesis* **1989**, 167; G. R. Krow; *Org. React.* **1993**, 43: 251; M. Lopp, A. Paju, T. Kanger, T. Pehk; *Tetrahedron Lett.* **1996**, 37: 7583; G. Strukul; *Angew. Chem., Int. Ed.* **1998**, 37: 1199; K. B. Wiberg, J. R. Snoonian; *J. Org. Chem.* **1998**, 63: 1390; M. Renz, B. Meunier; *Eur. J. Org. Chem.* **1999**, 737; S. I. Murahashi, S. Ono, Y. Imada; *Angew. Chem., Int. Ed.* **2002**, 41: 2366; G. J. Brink, I. W. C. E. Arends, R. A. Sheldon; *Chem. Rev.* **2004**, 104: 4105; M. D. Mihovilovic, F. Rudroff, B. Groetzel; *Curr. Org. Chem.* **2004**, 8: 1057; C. L. Chandler, A. Phillips; *Org. Lett.* **2005**, 7: 3493; Q. H. Zhang, S. F. Wang, Z. Q. Lei; *Chinese Chem. Lett.* **2007**, 18: 4; J. R. A.-Idaboy, L. Reyes; *J. Org. Chem.* **2007**, 72: 6580; J. R. A.-Idaboy, L. Reyes, N. M.-Diez; *Org. Bioorg. Chem.* **2007**, 5: 3682; S. Xu, Z. Wang, X. Zhang, X. Zhang, K. Ding; *Angew. Chem., Int. Ed.* **2008**, 47: 2840; A. V. Malkov, F. Friscourt, M. Bell, M. E. Swarbrick, P. Kocovský; *J. Org. Chem.* **2008**, 73: 3996; C. J. -Sanchidrián, J. R. Ruiz; *Tetrahedron* **2008**, 64: 2011; C. Rodríguez, G. de Gonzalo, D. E. T. Pazmiño, M. W. Fraaije, V. Gotor; *Tetrahedron: Asymmetry* **2008**, 19: 197; M. Zarraga, V. Salas, A. Miranda, P. Arroyo, C. Paz; *Tetrahedron: Asymmetry* **2008**, 19: 796.

• **Baeyer-Villiger tritylation 三苯甲基化反应**