ACS 数据库培训交流

“ To be the world’s most trusted source of the comprehensive knowledge needed to cultivate the chemists of tomorrow ”

2017年11月

Rudy Zhao

iGroup
中国长煦信息技术咨询（上海）有限公司
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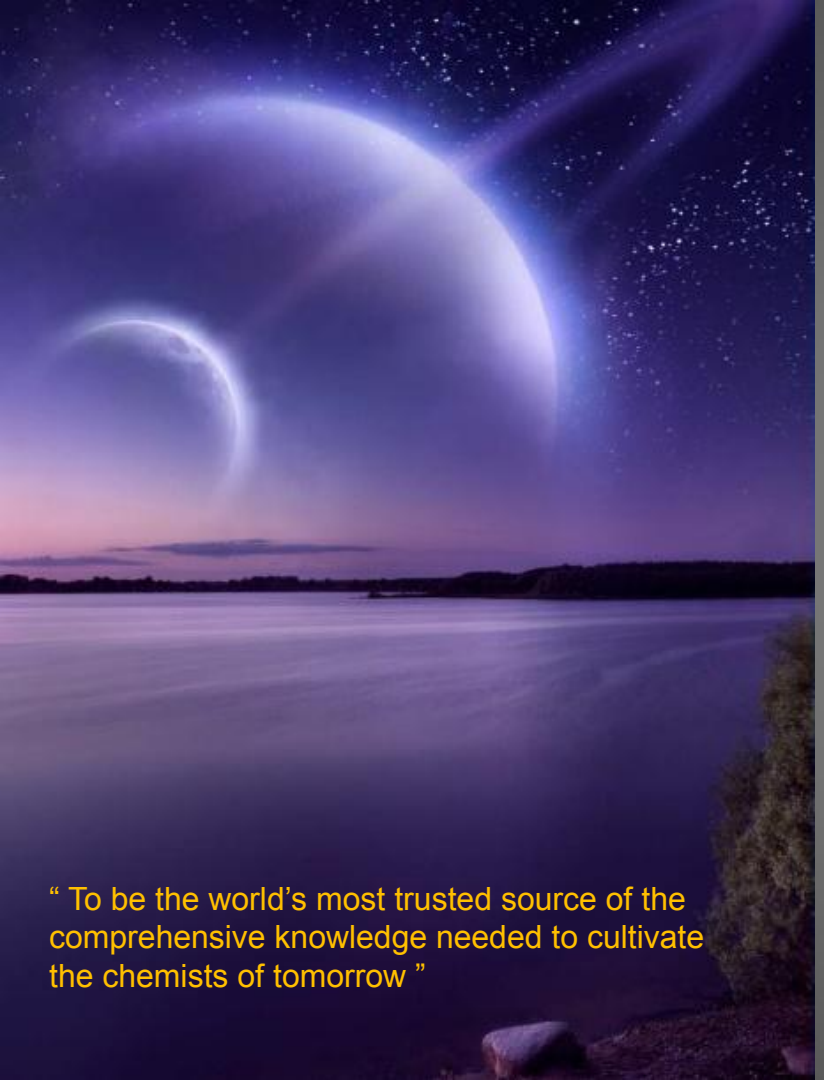

Contents

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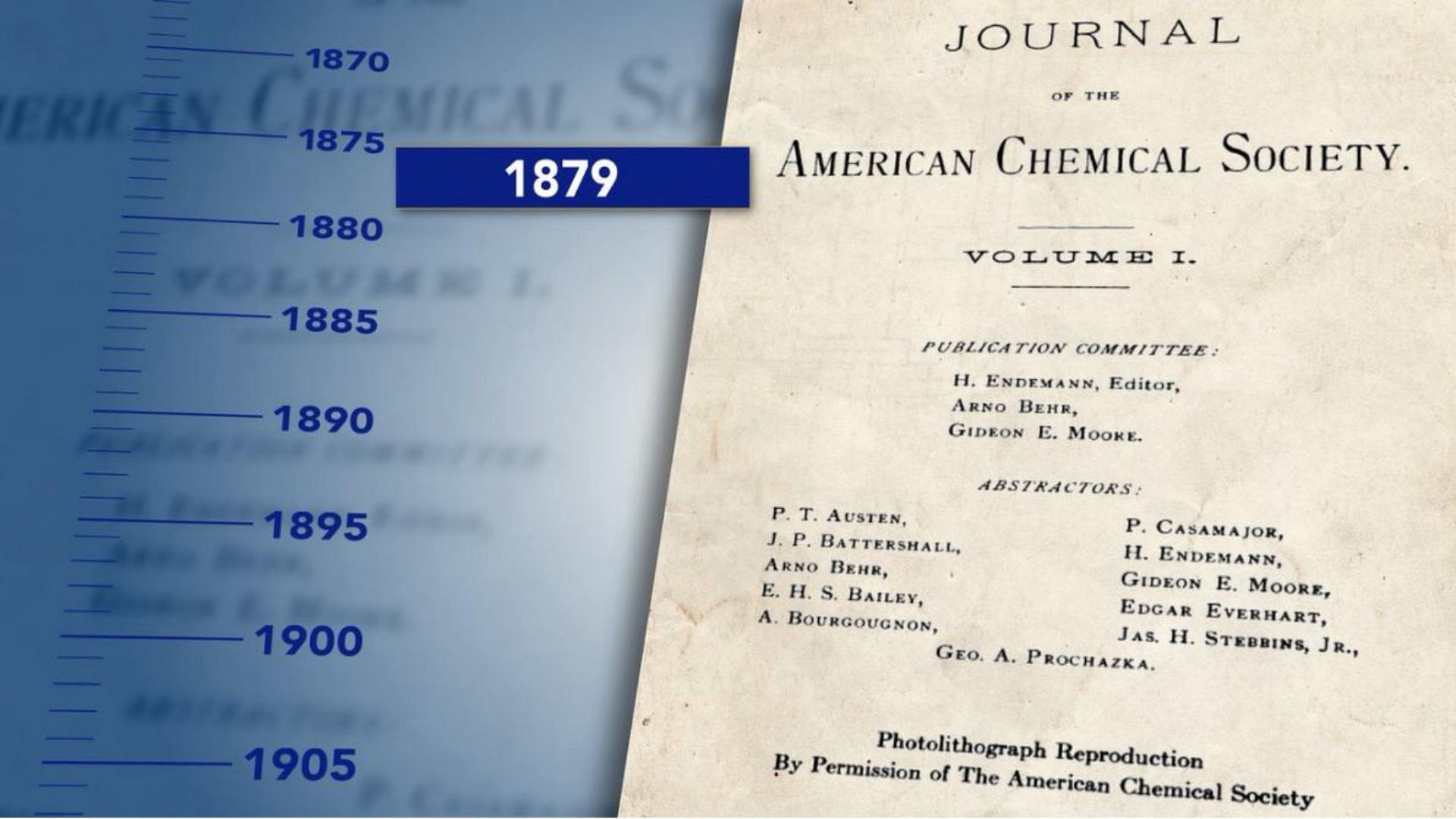
- 32 Technical Divisions provide programming and content for the National Meetings

1 ACS Publications Overview



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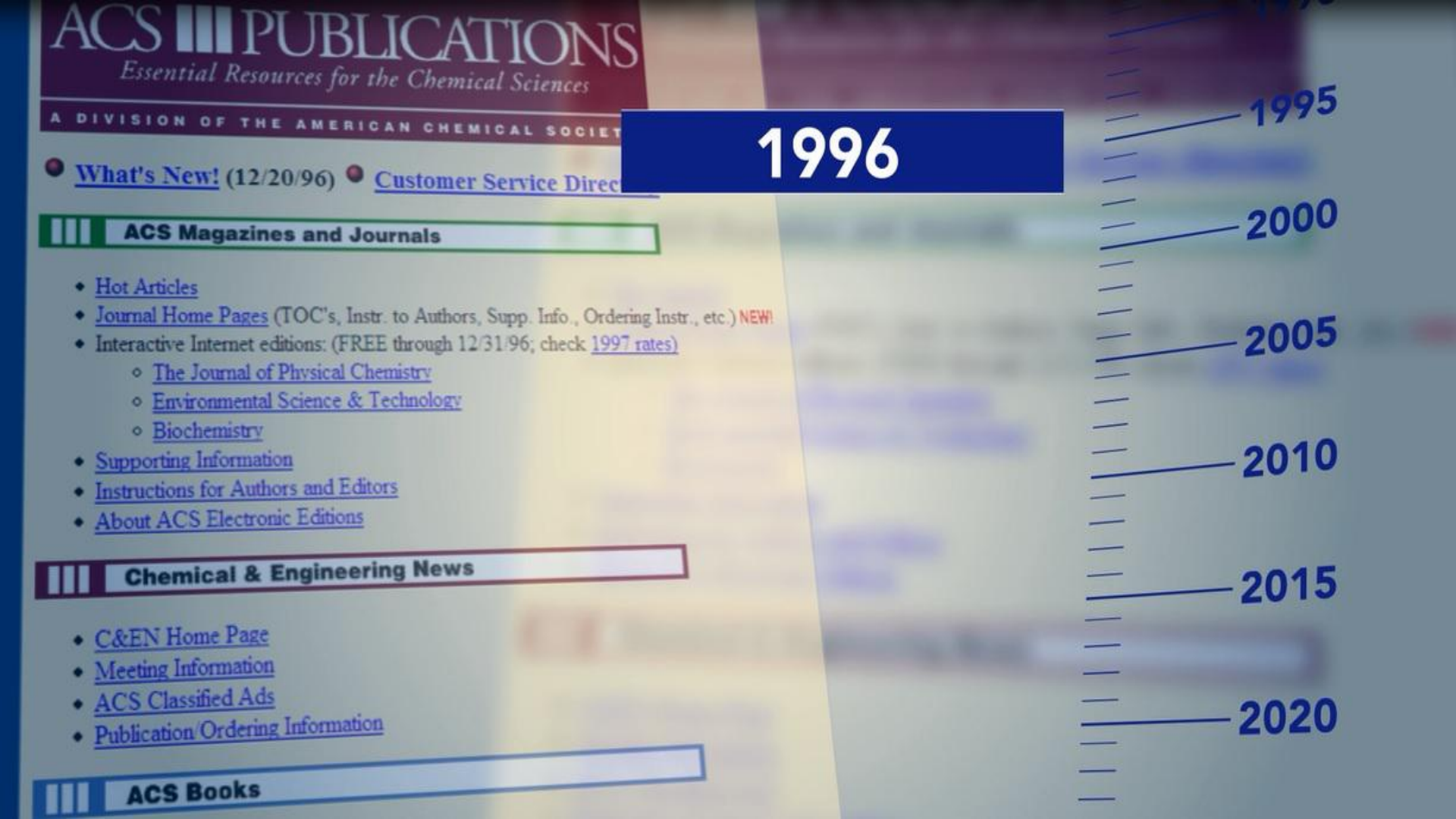
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- Microbiology
- Chemical Engineering
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- Computational Chemistry

JOURNAL OF THE AMERICAN CHEMICAL SOCIETY
美国化学会志

CHEMICAL REVIEWS
化学评论

ACCOUNTS OF CHEMICAL RESEARCH
化学研究述评

"To be the world's most trusted source of the comprehensive knowledge needed to cultivate the chemists of tomorrow"

***JACS* began publication in 1879**

无机化学、有机化学、物理化学、分析化学

期刊名称	期刊名称（中文）	2016 IF	2016 Cites
Crystal Growth & Design	《晶体生长与设计》	4.055	27,313
Inorganic Chemistry	《无机化学》	4.857	91,499
Organic Letters	《有机物快报》	6.579	93,207
Organic Process Research & Development	《有机工艺研究与开发》	2.857	5,961
Organometallics	《有机金属》	3.862	39,708
The Journal of Organic Chemistry	《有机化学》	4.849	99,193
The Journal of Physical Chemistry A	《物理化学A》	2.847	57,909
The Journal of Physical Chemistry B	《物理化学B》	3.177	115,987
The Journal of Physical Chemistry C	《物理化学C》	4.536	132,078
The Journal of Physical Chemistry Letters	《物理化学快报》	9.353	33,159
ACS Photonics	《ACS光子学》	6.756	3,354
ACS Sensor	《ACS传感器》	×	×
Analytical Chemistry	《分析化学》	6.32	117,787

催化、化学工程、能源、环境科学

期刊名称	期刊名称（中文）	2016 IF	2016 Cites
ACS Catalysis	《ACS催化》	10.614	27,113
ACS Sustainable Chemistry & Engineering	《ACS可持续化学和化工》	5.951	6,708
Industrial & Engineering Chemistry Research	《化工研究》	2.843	61,434
Journal of Chemical & Engineering Data	《化工数据》	2.323	21,099
ACS Energy Letters	《ACS能源快报》	×	×
Energy & Fuels	《能源和燃料》	3.091	34,474
Environmental Science & Technology	《环境科学和技术》	6.198	145,022
Environmental Science & Technology Letters	《环境科学和技术快报》	5.308	985

高分子化学、材料科学、纳米科学

期刊名称	期刊名称（中文）	2016 IF	2016 Cites
ACS Macro Letters	《ACS大分子快报》	6.185	7,015
Macromolecules	《大分子》	5.835	102,000
ACS Applied Materials & Interfaces	《ACS应用材料和界面》	7.504	84,383
Chemistry of Materials	《材料化学》	9.466	92,255
Langmuir	《朗缪尔》	3.833	116,898
ACS Nano	《ACS纳米》	13.942	116,242
Nano Letters	《纳米快报》	12.712	141,715

生物、生物化学、生物材料、药物化学、毒理学等

期刊名称	期刊名称（中文）	2016 IF	2016 Cites
ACS Biomaterials Science & Engineering	《ACS生物材料科学和工程》	3.234	635
ACS Chemical Biology	《ACS化学生物学》	4.995	9,279
ACS Synthetic Biology	《ACS合成生物学》	5.382	2,140
Biochemistry	《生物化学》	2.938	77,077
Bioconjugate Chemistry	《生物共轭化学》	4.818	14,608
Biomacromolecules	《生物大分子》	5.246	34,220
Journal of Natural Products	《天然产物》	3.281	22,826
Journal of Proteome Research	《蛋白质组研究》	4.268	21,221
ACS Chemical Neuroscience	《ACS化学神经科学》	3.883	3,084
ACS Infectious Diseases	《ACS传染疾病》	3.6	313
ACS Medicinal Chemistry Letters	《ACS药物化学快报》	3.746	4,359
Chemical Research in Toxicology	《毒物学领域的化学研究》	3.278	11,522
Journal of Medicinal Chemistry	《药物化学》	6.259	67,933
Molecular Pharmaceutics	《分子药剂学》	4.44	13,486

信息与理论化学、食品化学、地球化学、化学教育、跨学科化学期刊

期刊名称	期刊名称（中文）	2016 IF	2016 Cites
Journal of Chemical Information and Modeling	《化学信息与建模》	3.76	13,649
Journal of Chemical Theory and Computation	《化学理论与计算》	5.245	24,768
Journal of Agricultural and Food Chemistry	《农业与食品化学》	3.154	94,238
ACS Earth & Space Chemistry	《ACS地球和空间化学》	×	×
Accounts of Chemical Research	《化学研究述评》	**20.268**	61,609
ACS Combinatorial Science	《ACS组合科学》	3.168	1,520
Chemical Reviews	《化学评论》	**47.928**	159,155
Journal of Chemical Education	《化学教育》	1.419	9,231
Journal of the American Chemical Society	《美国化学会志》	**13.858**	514,759

2 Open Access Journals

ACS Central Science first issue spring 2015

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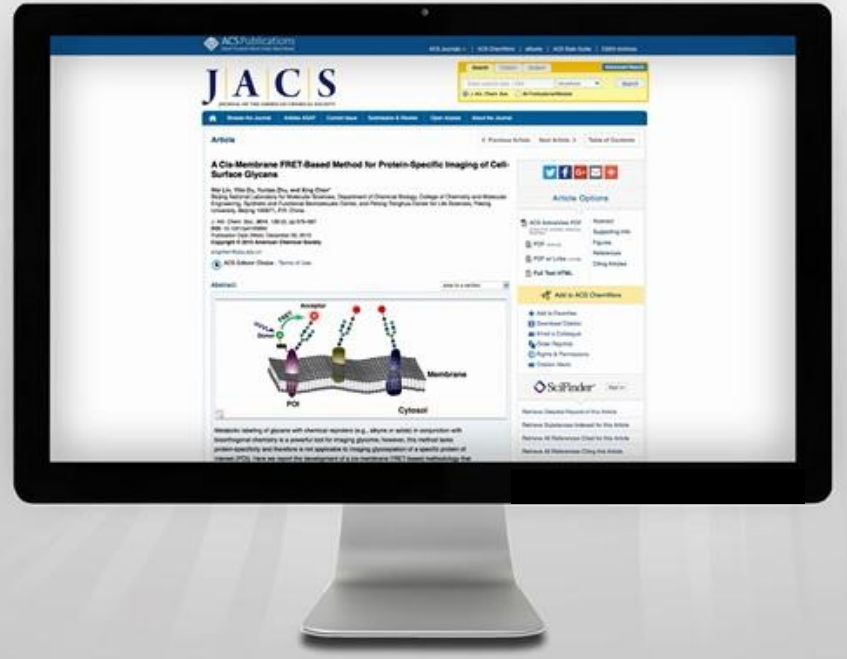
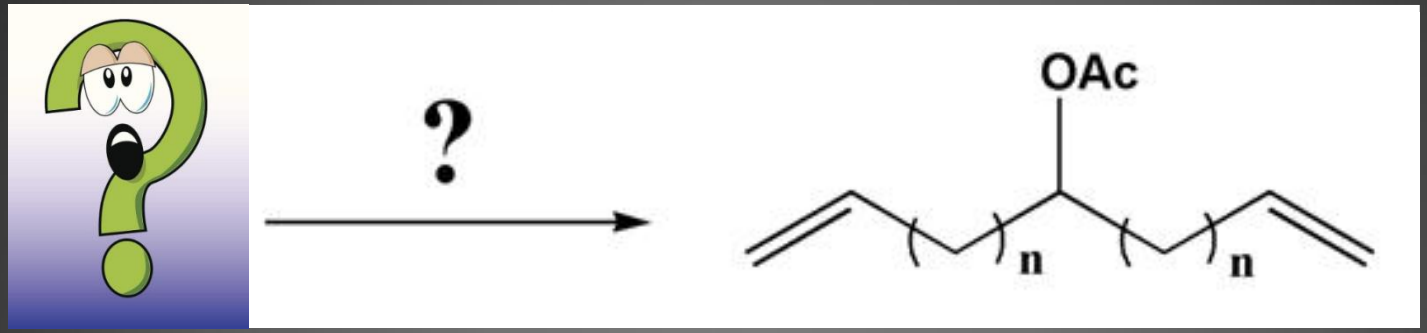
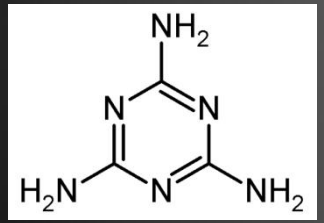
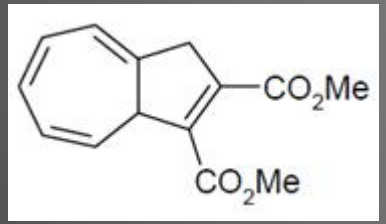


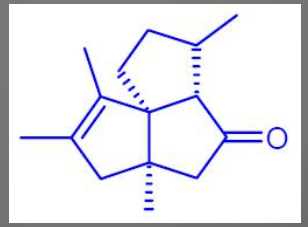
3 Literature Research

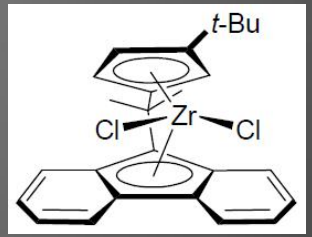
完成研究中的步骤：How to get it？

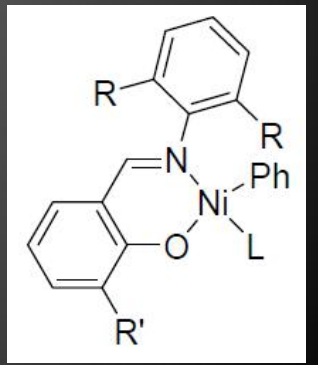


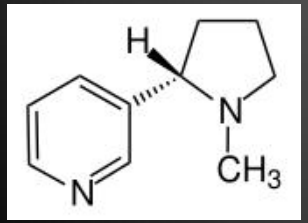


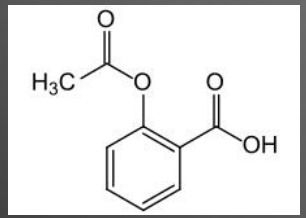


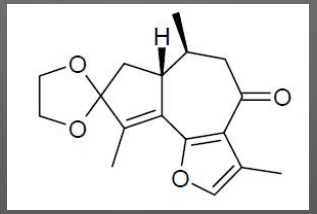


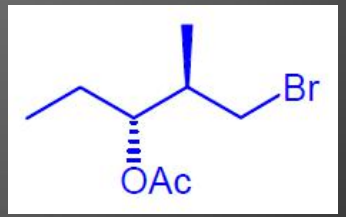






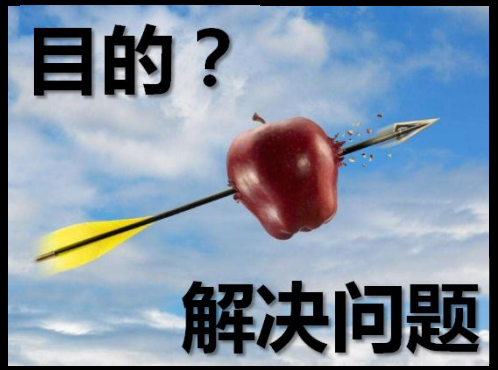






文献调研

1. 信息来源
2. 文献检索
3. 文献阅读
4. 文献整理



文献调研

1 信息来源

收录文献齐全和高级别数据库
Scifinder Scholar, WOS
CNKI, ACS, Wiley, RSC...

2 文献检索

用于化学类信息检索的数据库
Scifinder: 主题检索, 物质检索, 反应检索
Web of Science: 高被引、热门、综述SCI文献

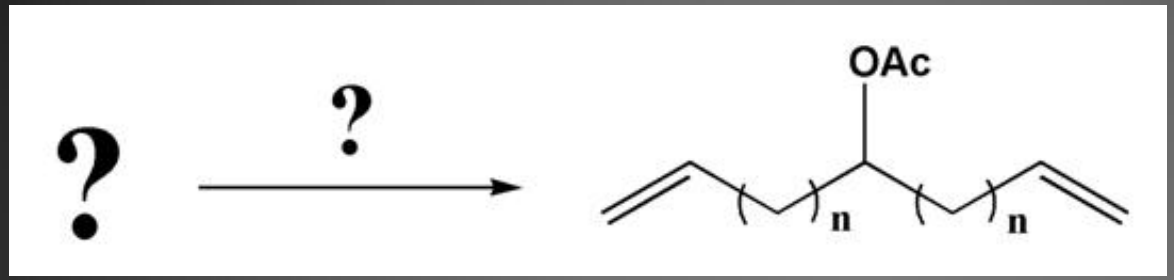
3 文献阅读

优先阅读：最相关、综述、高被引、最新、顶级刊物的SCI
阅读内容：标题、文摘、前言、结论、图表, 决定是否精读
阅读积累：阅读速度、阅读记录、根据目的去精读或略读

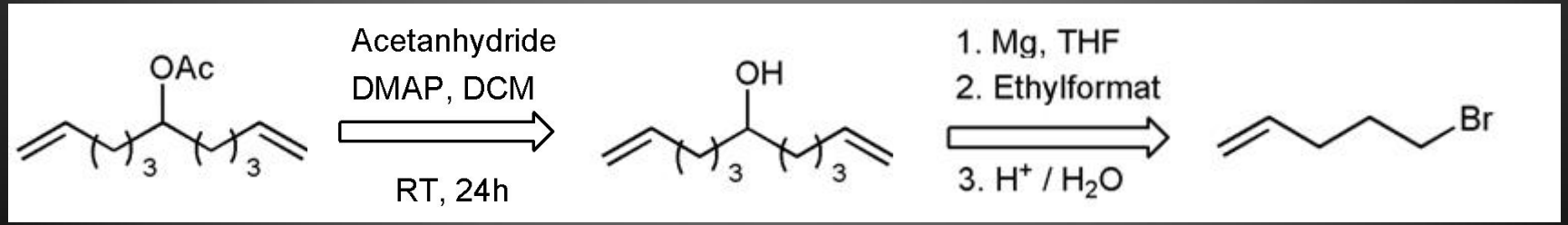
4 文献整理

建立合适自己的文献调研方法：使用文献管理工具 例如 Endnote
以文献调研的目的出发，完成资源整理过程：检索、阅读、总结

How to get it ? ⟹ **工具：“ SciFinder ”**



写出某化合物结构式，得到相关文献

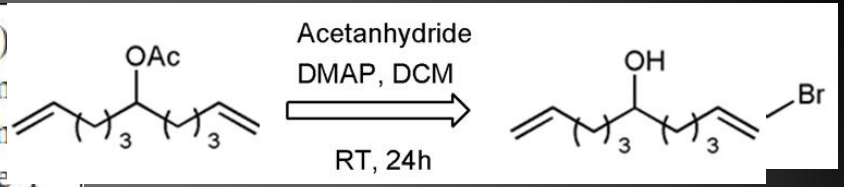


All the other five monomers were synthesized by direct acetylating of the pre-monomers. Take the synthesis of **M6** as an example.

The diol **preM6** (0.99 g, 5 mmol), acetic anhydride (3.06 g, 30 mmol), and DMAP (122 mg, 1 mmol) were sequentially weighed and transferred into a 100 mL round bottom flask. Then 30 mL CH_2Cl_2 was added to generate a homogeneous solution, which was vigorously stirred overnight at room temperature. The reaction mixture was neutralized with Na_2CO_3 solution, sequentially washed with deionized water and brine, dried with anhydrous Na_2SO_4, filtered, and evaporated to afford a yellowish liquid, which was further purified by silica gel column chromatography (petroleum ether/ethyl acetate = 20/1). Monomer **M6** was obtained as a colorless liquid in 99% yield. ^{1}H NMR (400 MHz, $CDCl_3$), δ (TMS, ppm): 5.74 (dq, J = 10.0, 7.1 Hz, 2H), 5.06 (m, 4H), 4.90 (m, 2H), 2.29 (m, 4H), 2.03 (s, 6H), 1.53 (m, 4H), 1.32 (m, 4H). ^{13}C NMR (101 MHz, $CDCl_3$): δ 170.59, 133.65, 117.55, 72.99 (d, J = 3.4 Hz), 38.59 (d, J = 3.0 Hz), 33.38, 25.05, 21.10. ESI-MS: $[M + Na^+] = C_{16}H_{26}O_4Na$, calcd: 305.17233, found: 305.17192.

Monomers **M2**–**M5** were prepared in a similar way as colorless liquids in nearly quantitative yields.

^{1}H NMR of **M2** (400 MHz, $CDCl_3$), δ (TMS, ppm): 5.72 (tdt, J = 12.3, 10.3, 6.0 Hz, 2H), 5.07 (m, 6H), 2.35 (m, 4H), 2.05 (d, J = 15.1 Hz, 6H). ^{13}C NMR (101 MHz, $CDCl_3$): δ 170.03, 132.88 (d, J = 43.6 Hz), 117.99 (d, J = 39.8 Hz), 72.47 (d, J = 24.9 Hz), 34.75 (d, J = 111.2 Hz), 20.76 (d, J = 4.5 Hz) (Fig. S8). ESI-MS: $[M + Na^+] = C_{12}H_{18}O_4Na$, calcd: 249.10973, found: 249.10938.



未知化合物的参考实验步骤：

反应物、溶剂、操作 …

反应条件？

反应中止？

萃取、除杂、过滤 …

提纯

光谱分析：获得和文献相同的结果

文献调研：研究课题领域 ---- 查找综述文献

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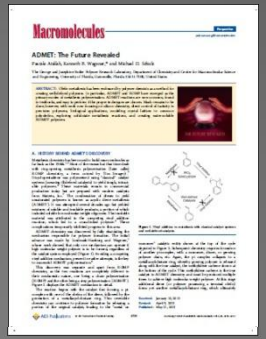
Citing Articles



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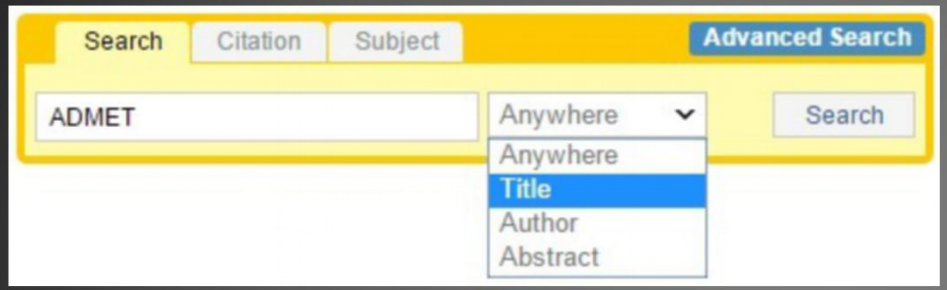
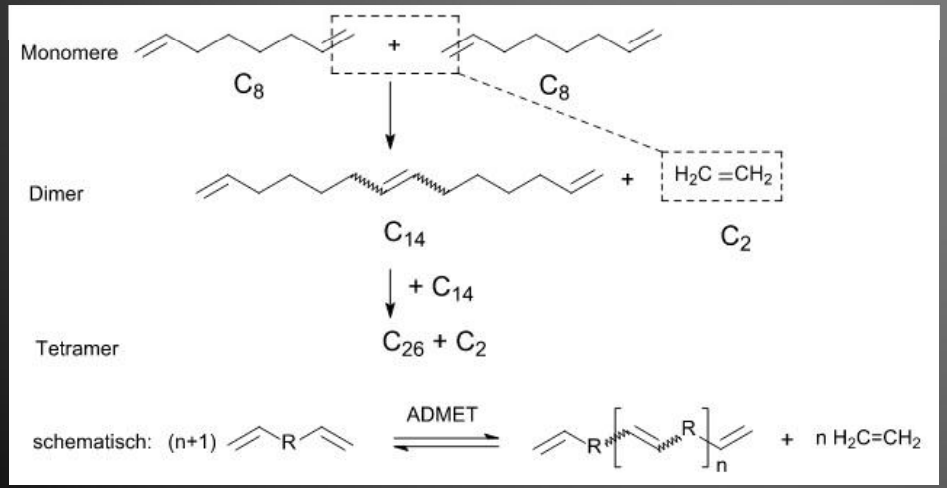
Review Article

可能具有相关性

文献调研：检索实例 I

Acyclic Diene Metathesis





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ADMET: The Future Revealed

Pascale Atallah, Kenneth B. Wagener, and Michael D. Schulz
Macromolecules, 2013, *46* (12), pp 4735-4741
Publication Date (Web): May 21, 2013 (Perspective)
DOI: 10.1021/ma400067b
Olefin metathesis has been embraced by polymer chemists as a method for creating well-defined polymers. In particular, ADMET and ROMP have emerged as the primary modes of metathesis polymerization. ADMET reactions are now common, found in textbooks, and ...

检索结果的第一篇
Review综述类文献

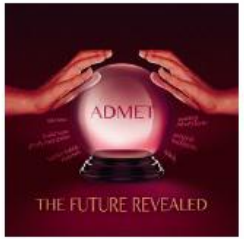

Figure 1 of 9

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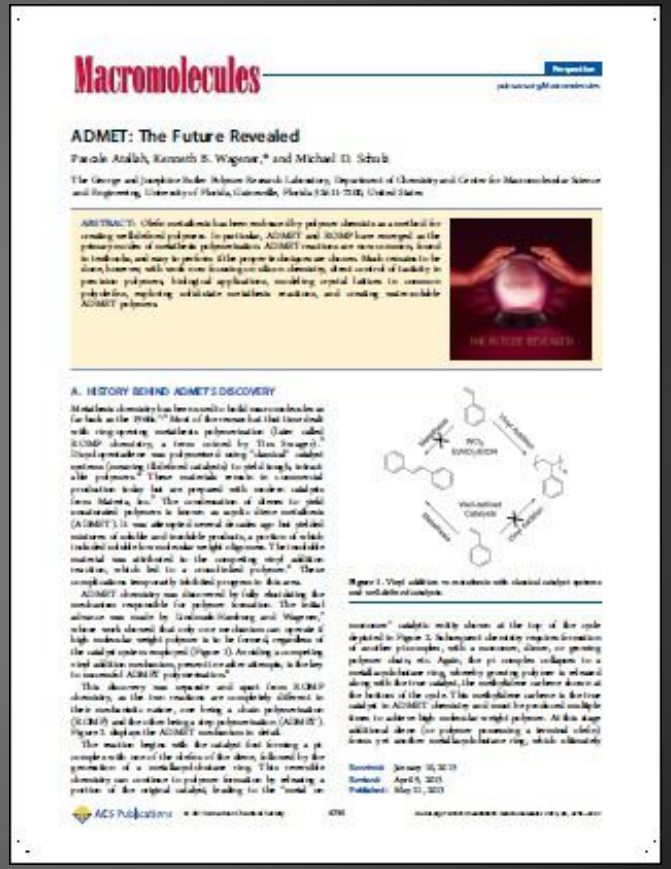
- 作者对研究课题的总结与展望



Macromolecules

ADMET: The Future Revealed

Parisa Atallah, Kenneth B. Wagener,* and Michael D. Schulz

A. HISTORY BEHIND ADMET'S DISCOVERY

Macromolecules

Perspective

pubs.acs.org/Macromolecules

Review
综述类文献

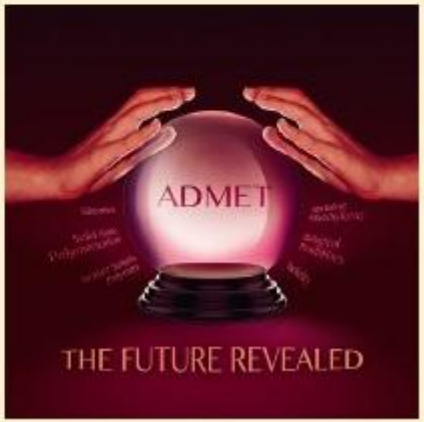
ADMET: The Future Revealed

Pascale Atallah, Kenneth B. Wagener,* and Michael D. Schulz

The George and Josephine Butler Polymer Research Laboratory, Department of Chemistry and Center for Macromolecular Science and Engineering, University of Florida, Gainesville, Florida 32611-7200, United States

ABSTRACT: Olefin metathesis has been embraced by polymer chemists as a method for creating well-defined polymers. In particular, ADMET and ROMP have emerged as the primary modes of metathesis polymerization. ADMET reactions are now common, found in textbooks, and easy to perform if the proper techniques are chosen. Much remains to be done, however, with work now focusing on silicon chemistry, direct control of tacticity in precision polymers, biological applications, modeling crystal lattices in common polyolefins, exploring solid-state metathesis reactions, and creating water-soluble ADMET polymers.

ABSTRACT：该课题研究的领域，概念，应用



A. HISTORY BEHIND ADMET'S DISCOVERY

Metathesis chemistry has been used to build macromolecules as far back as the 1960s.[1,2] Most of the research at that time dealt with ring-opening metathesis polymerization (later called ROMP chemistry, a term coined by Tim Swager).[3] Dicyclopentadiene was polymerized using "classical" catalyst systems (meaning ill-defined catalysts) to yield tough, intractable polymers.[4] These materials remain in commercial production today but are prepared with modern catalysts from Materia, Inc.[5] The condensation of dienes to yield unsaturated polymers is known as acyclic diene metathesis (ADMET). It was attempted several decades ago but yielded

历史与发展

B. ADMET: IT IS NOT CHAIN POLYMERIZATION CHEMISTRY. IT IS STEP POLYCONDENSATION CHEMISTRY

As interest in condensation metathesis polymerization (ADMET) increased over the years, the reaction was performed under conditions that are relevant mainly to chain polymerization. Solvents were almost always employed, and reaction temperatures were kept relatively low. Doing so yields low molecular weight polymer.

定义与概念
重要机理

C. ADMET: THE FUTURE REVEALED

1. Silicon Additives for Surface Modification. Because of their enhanced properties, such as high thermal stability, good electrical resistance, low surface tension, low glass transition temperature, and high hydrophobicity,[20] investigation of silicon–carbon hybrid materials is a rapidly developing area. This interest is further heightened by the many applications available for these polymers in biomedical materials, electronic devices, coatings, and fibers.[21]

2. Biological Possibilities: There Are Many. The use of ADMET in a biological context is just beginning. In part, this is because water—Nature's solvent of choice—will not solublize the typical, polyethylene-like ADMET polymer. Nevertheless, ADMET has been used to create polymers comprising amino acids,[30] sunscreen chromophores,[31] and nonsteroidal anti-inflammatory drugs (NSAIDs) (Figure 4).[32] The application

3. Water-Soluble ADMET Polymers. Many problems in biology and medicine have been addressed by use of water-soluble polymers.[34] Surprisingly, there has been no report of an ADMET polymer with a water-soluble main chain. Much of what has already been synthesized in the field of biologically oriented ADMET polymers will be revisited when this water-soluble backbone is created. This field is largely unexplored, for now, and the opportunities are virtually boundless.

研究的各类应用

4. Tacticity under Control. Tacticity represents one of the most fundamental concepts in polymer chemistry.[35] One has only to compare the properties of syndiotactic, isotactic, and atactic polypropylene to understand the important consequences that controlling (or not controlling) the tacticity of a polymer has on the properties of a material.[36] The result of the creation of these materials was the Nobel prize awarded jointly to Karl Ziegler and Giulio Natta in 1963, in part for the creation of polypropylene.[37]

5. Systematically Modeling Polyethylene. Branching has a significant impact on the ultimate properties of any ethylene-based polymer (LDPE, LLDPE, HDPE). In chain-made PE, branches are formed through uncontrolled intramolecular and intermolecular chain transfer, resulting in branches of random chain lengths and distribution on the backbone (Figure 6a). Since ADMET offers a method of

6. Solid-State Chemistry Is Important, Too. As mentioned previously, solution or melt polymerizations are the norm. While these approaches are successful, they remain inadequate for creating intractable polymers. In such cases, solid-state polymerization presents a viable alternative.

研究的各类应用

D. ADMET: IT IS NOT JUST US

Although we can predict the future of ADMET in the Wagener group, the same cannot be said for other scientists in the field. However, the past is often the most accurate predictor of the future, and so we can look to what other groups have published[45−50] for a clue as to what the future holds for ADMET around the world.

One of the major research efforts of several groups has been the synthesis of complex macromolecular architectures, and ADMET has played a significant role in this endeavor.[51−55] Hyperbranched polymers via ADMET have been especially well-studied.[56−59]

ADMET polymerization has also had an impact in the field of green chemistry.[60] The Meier group has been particularly innovative in producing ADMET polymers from biorenewable sources.[61−63] This is a new and exciting area that could open new research avenues.

总结展望

Kenneth B. Wagener, Ph.D., is a George & Josephine Butler Professor of Polymer Chemistry at the University of Florida and Director of the Center for Macromolecular Science and Engineering. Among his many awards and honors, Dr. Wagener received the Max Planck Institute for Polymer Research Award in Mainz, Germany, and was a Kyoto University "Global Center of Excellence" Visiting Professor in Kyoto, Japan. He also received the ACS Herty Medal in 2010 and was selected as a 2011 Fellow of the American Chemical Society. Dr. Wagener has been a Contributing Editor of the prestigious journal *Polymer Reviews*. He earned his bachelor's degree in Chemistry from Clemson University and his doctorate in Organic and Polymer Chemistry from the University of Florida.

作者履历

■ REFERENCES

(1) Natta, G.; Dall'Asta, G.; Mazzanti, G. *Angew. Chem.* **1964**, *76*, 765.

(2) Graulich, W.; Swodenk, W.; Theisen, D. *Hydrocarbon Process.* **1972**, *53*, 71.

(3) Grubbs, R. *Handbook of Metathesis*; Wiley-VCH: Weinheim, 2003; Vol. 3, p 1.

(4) Eleuterio, H. S. Polymerization of Cyclic Olefins. E. I. du Pont de Nemours and Company, 3,074,918, Jan 22, 1963.

(5) Materia, www.materia-inc.com (accessed 3 Dec 2012).

(6) (a) Doyle, G. *J. Catal.* **1973**, *30*, 118. (b) Dall'Asta, G.; Stigliani, G.; Greco, A.; Motta, L. *Chim. Ind.* **1973**, *55*, 142. (c) Korshak, Y. V.; Tienkpoatchev, M. A.; Dologoplosk, B. A.; Avdeinkina, E. G.; Kutepov, D. F. *J. Mol. Catal.* **1982**, *15*, 207−218.

(7) Lindmark-Hamberg, M.; Wagener, K. B. *Macromolecules* **1987**, *20*, 2949−2951.

(8) Wagener, K. B.; Boncella, J. M.; Nel, J. G.; Duttweiler, R. P.; Hillmyer, M. A. *Makromol. Chem.* **1990**, *191*, 365−374.

(9) (a) Mutlu, H.; de Espinosa, L. M.; Meier, M. A. R. *Chem. Soc. Rev.* **2011**, *40*, 1404−1445. (b) Opper, K.; Wagener, K. B. *J. Polym. Sci.* **2011**, *49*, 821−831. (c) Baughman, T. W.; Wagener, K. B. *Adv. Polym. Sci.* **2005**, *176*, 1−42.

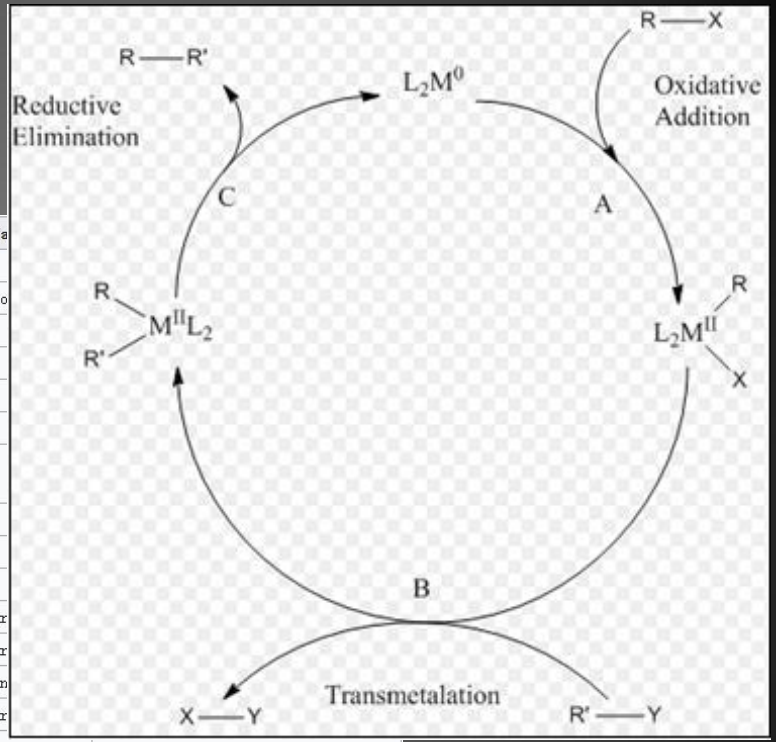
(10) (a) Trnka, T. M.; Grubbs, R. H. *Acc. Chem. Res.* **2001**, *34*, 18−29. (b) Vougioukalakis, G. C.; Grubbs, R. H. *Chem. Rev.* **2010**, *110*, 1746−1787.

(11) (a) Schaverien, C. J.; Dewan, J. C.; Schrock, R. R. *J. Am. Chem. Soc.* **1986**, *108*, 2771−2773. (b) Schrock, R. R.; DePue, R. T.; Feldman, J.; Schaverien, C. J.; Dewan, J. C.; Liu, A. H. *J. Am. Chem. Soc.* **1988**, *110*, 1423−1435. (c) Schrock, R. R.; DePue, R. T.;

参考文献

文献调研：检索实例 II

cross-coupling reaction 交叉偶联反应



Reaction	Year	Reactant A		Reactant B		Homo/Cross	Ca	
Wurtz reaction	1855	R-X	sp^3	R-X	sp^3	homo		
Pinacol coupling reaction	1859	R-HC=O or $R(C=O)R_2$		R-HC=O or $R(C=O)R_2$		homo	vario	
Glaser coupling	1869	RC≡CH	sp	RC≡CH	sp	homo	Cu	
Ullmann reaction	1901	Ar-X	sp^2	Ar-X	sp^2	homo	Cu	
Grignard reaction	1912	R-MgBr		R-HC=O or $R(C=O)R_2$		cross		
Gomberg-Bachmann reaction	1924	Ar-H	sp^2	$Ar-N_2X$	sp^2	homo		
Cadiot-Chodkiewicz coupling	1957	RC≡CH	sp	RC≡CX	sp	cross	Cu	
Castro-Stephens coupling	1963	RC≡CH	sp	Ar-X	sp^2	cross	Cu	
Corey-House synthesis	1967	R_2CuLi or RMgX	sp^3	R-X	sp^2, sp^3	cross	Cu	
Cassar reaction	1970	Alkene	sp^2	R-X	sp^3	cross	Pd	
Kumada coupling	1972	Ar-MgBr	sp^2, sp^3	Ar-X	sp^2	cross	Pd or	
Heck reaction	1972	alkene	sp^2	Ar-X	sp^2	cross	Pd or	
Sonogashira coupling	1975	RC≡CH	sp	R-X	sp^3 sp^2	cross	Pd an	
Negishi coupling	1977	R-Zn-X	sp^3, sp^2, sp	R-X	sp^3 sp^2	cross	Pd or	
Stille cross coupling	1978	$R-SnR_3$	sp^3, sp^2, sp	R-X	sp^3 sp^2	cross	Pd	
Suzuki reaction	1979	$R-B(OR)_2$	sp^2	R-X	sp^3 sp^2	cross	Pd or Ni	requires base
Hiyama coupling	1988	$R-SiR_3$	sp^2	R-X	sp^3 sp^2	cross	Pd	requires base
Buchwald-Hartwig reaction	1994	R_2N-H	sp^3	R-X	sp^2	cross	Pd	N-C coupling, second generation free amine
Fukuyama coupling	1998	R-Zn-I	sp^3	RCO(SEt)	sp^2	cross	Pd or Ni	
Liebeskind－Srogl coupling	2000	$R-B(OR)_2$	sp^3, sp^2	RCO(SEt) Ar-SMe	sp^2	cross	Pd	requires CuTC

Coupling reaction overview

文献调研：检索实例 II

cross-coupling reaction 交叉偶联反应

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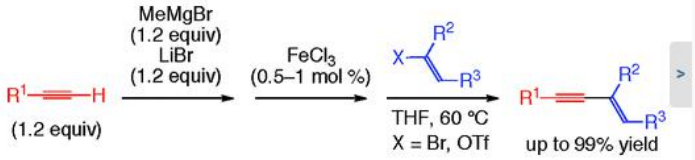
Publication Date (Web): November 6, 2008 (Letter)
DOI: 10.1021/ol8020226

In the presence of 0.5–1 mol % of $FeCl_3$ with lithium bromide as a crucial additive, alkynyl Grignard reagents, prepared from the corresponding alkynes and methylmagnesium bromide, react with alkenyl bromides or triflates to give the corresponding …



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alkynyl Grignard reagents, prepared from the co
methylmagnesium bromide, react with alkenyl t
corresponding …

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George B. Smith, George C. Dezeny, David L
Thomas R. Verhoeven
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DOI: 10.1021/jo00105a036
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Lauri Sikk, Jaana Tammiku-Taul, and Peeter
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Stille Cross-Coupling Reaction of an α-

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exemplified for the first time with a wide range
access to functionalized α-substituted enamines

Cross-Coupling Reaction of Organoboron Compounds with Organic Electrophiles

Letter

Iron-Catalyzed Enyne Cross-Coupling Reaction

Takuji Hatakeyama, Yuya Yoshimoto, Toma Gabriel and Masaharu Nakamura*
International Research Center for Elements *Science*, *Institute for Chemical Research*, Kyoto University, Uji, Kyoto, 611-0011, Japan

Org. Lett., **2008**, *10* (23), pp 5341–5344
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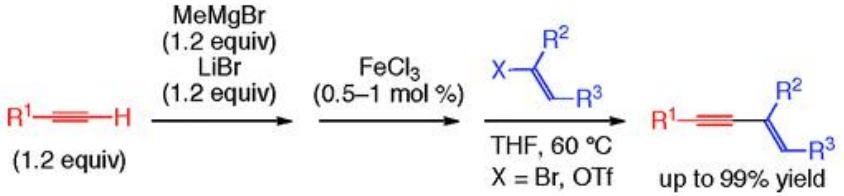
铁催化 烯炔 交叉偶联反应

Abstract



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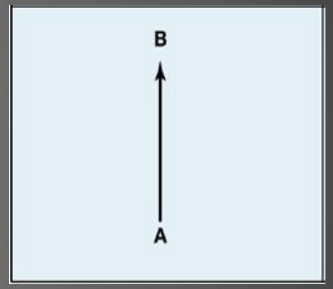

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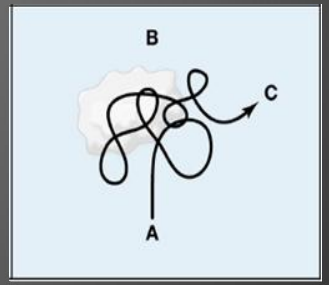

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ACS ON CAMPUS

You've done your research and now it's time to prepare your manuscript, choose a journal, get published, and attract a large readership. Easy, right?

Preparing your manuscript for publication is no picnic! Not only do you need to prepare a manuscript that is clear, concise, and captivating, you also need to find the best home for it.

We've put together 10 tips to help you write a successful manuscript and choose the most appropriate journal.

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Start your outline early in a project. As you gather data, make sure to ask yourself "why, what, and how" major advances emerged from your study. "What do the results mean?" "Why did I do these reactions?"

2 Choose the journal carefully

Understand which field your findings will have the greatest impact. Identify who you want to reach. Match your desired audience with the readership of the journal. Consider the scope of the journal not the impact factor!

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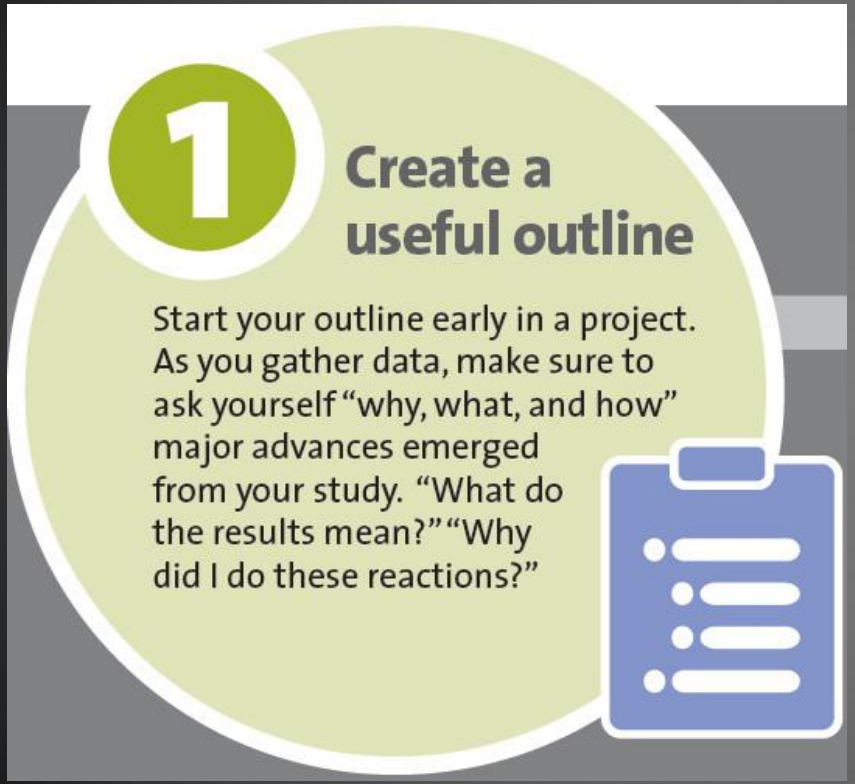
Understand what is expected of your manuscript submission. Each journal has a different set of guidelines, so review carefully!



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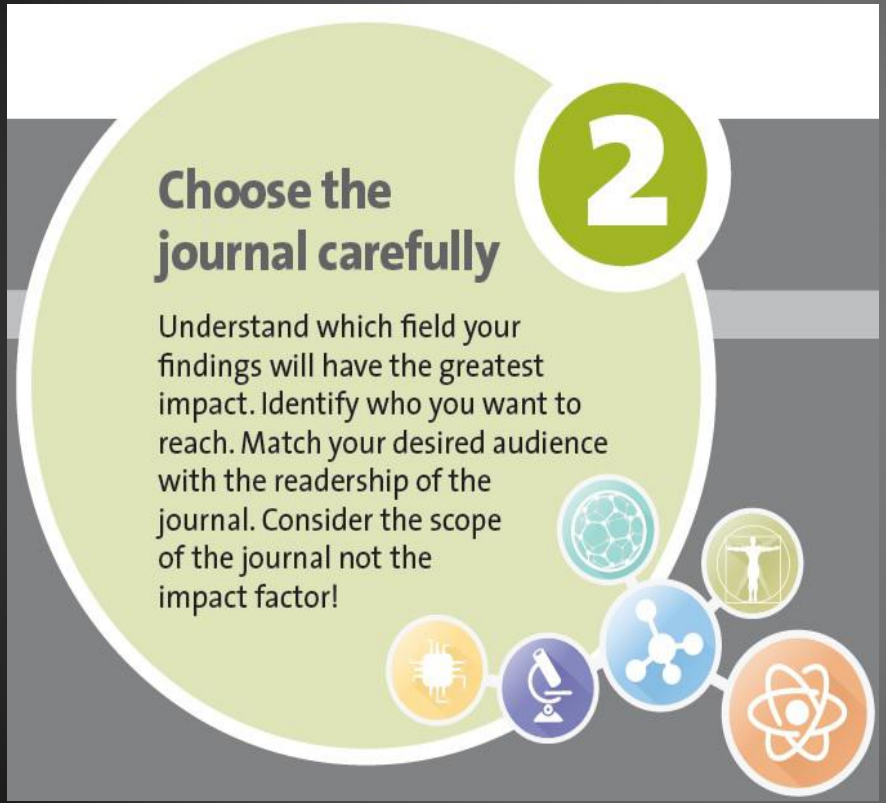
- 考虑文章的投稿方向



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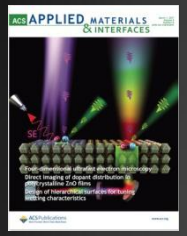

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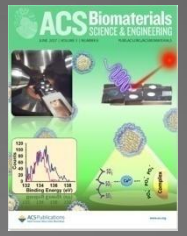

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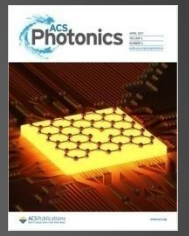

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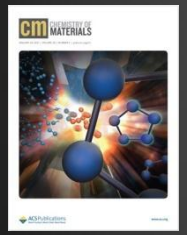

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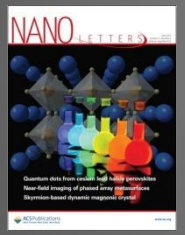

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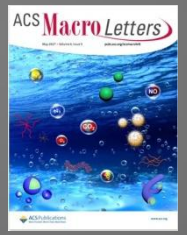

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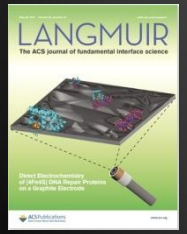

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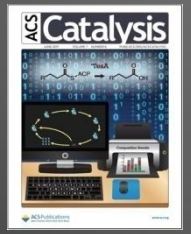

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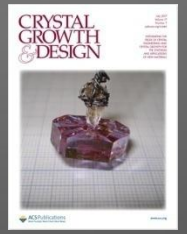

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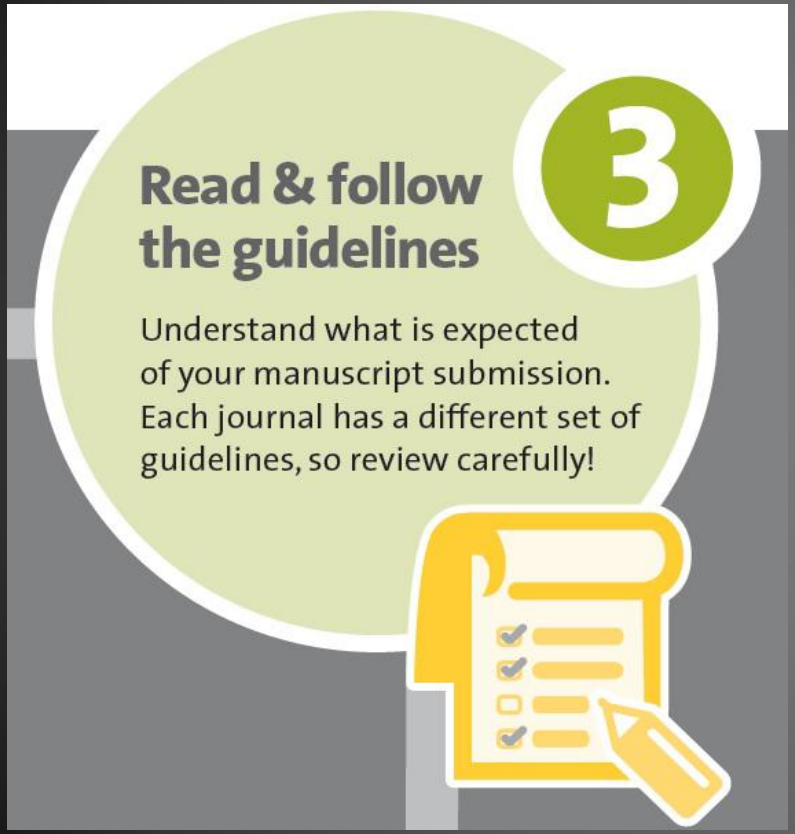

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- Author Guidelines [PDF]
- Submit a Manuscript or Review
- Ethical Guidelines
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About the Journal

- About the Journal
- Editor Profile

编辑部

- Editorial Board
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- Editorial Advisory Board [PDF]
- Advertising Media Kit

J. Org. Chem. 的 Author Guidelines

Scope of the Journal

The Journal of Organic Chemistry (JOC) welcomes original contributions of fundamental research in all branches of the theory and practice of organic chemistry. In selecting manuscripts for publication, the editors place emphasis on the quality and originality of the work as well as the breadth of interest to the organic chemistry community.

Total synthesis and other multistep synthesis manuscripts are expected to demonstrate novel strategies, new synthetic transformation methods, or shortened routes to target structures. Manuscripts illustrating new synthetic methods need to show conceptual novelty, not merely the extension of previously reported chemistry to a different class of reaction substrates, reagents, or catalysts. Natural products isolation and identification studies should report unusual skeletal features, improvements in identification methods, or insights into biosynthetic pathways. Manuscripts with a major component of biology, analytical chemistry, or materials science should demonstrate novelty in the organic chemistry portion of the work being reported.

期刊范围：

有机化合物的全合成，多步合成，短路径靶向结构合成

新合成方法需要展现全新的思路概念

天然产物的分离和鉴定报道新的化合物骨架特点和分析鉴定方法的进展

All **experimental procedures and compound characterization data** are included in the manuscript's experimental section. None appear in the supporting information, which is intended primarily for spectra, chromatograms, crystallographic data, documentation of theoretical calculations, and peripheral discussion.

All **tables and graphics** (figures, reaction schemes, and chemical structures) are inserted within the manuscript text where they are first discussed.

A **supporting information availability statement** that lists the types of data in the supporting information files is included in the manuscript file.

A **Compound Characterization Checklist** is furnished if the manuscript reports characterization data for new compounds or known compounds prepared by a new or modified method.

When single-crystal X-ray diffraction structures are reported, **CIF files** are furnished as supporting information files, even if the data have been deposited in a crystallographic database.

A previous submission of substantially the same manuscript to any ACS journal is disclosed in the cover letter. If the submission was reviewed, the cover letter includes the reviews and a detailed explanation of the changes made in response to them.

The **names and contact information of all coauthors** are entered in step 2 of the manuscript submission process in the same sequence and form in which they appear on the manuscript.

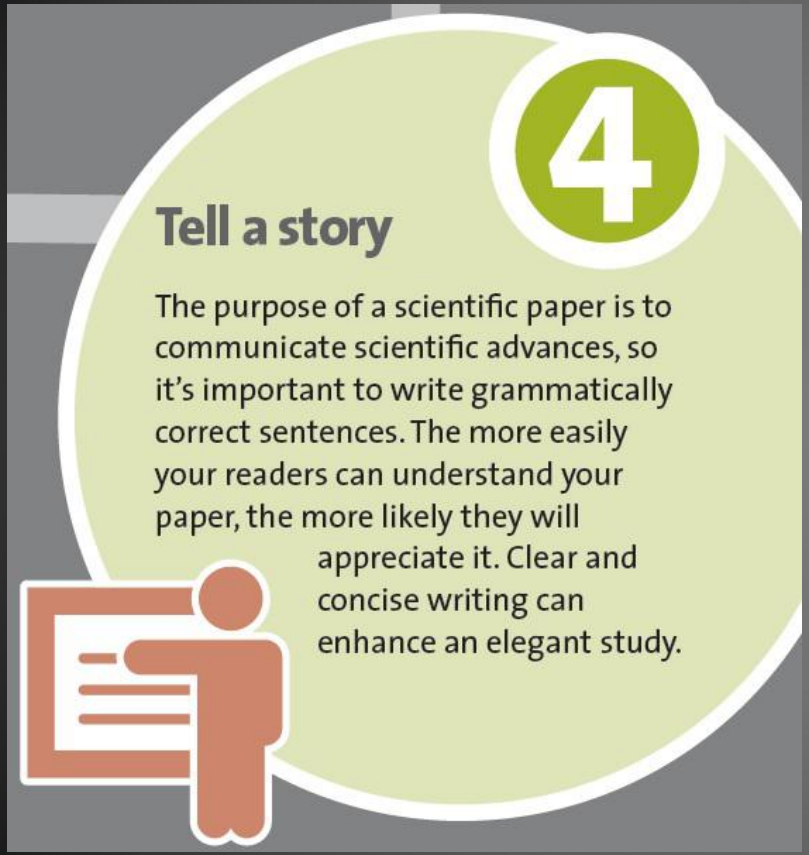
某些个别要求：例如JOC期刊对新化合物的各类光谱分析

JOC The Journal of Organic Chemistry

COMPOUND CHARACTERIZATION CHECKLIST

TO DISPLAY INSTRUCTIONS: Double-click HERE (Formula Bar must be visible: Select View>Formula Bar) TO CLOSE: Enter/Return

COMPOUND	IDENTITY															PURITY					COMPUTATIONAL			AUTHOR REMARKS
Compound, structure, or table-entry number	New	Known made by new/modified method	Weight and percentage yield	Physical state / mp range if cryst. solid	IR	UV-Vis	1H NMR	13C NMR	MS	MS Accurate mass (HRMS)	Optical rotation/ORD/CD	Enantiomeric /Diastereomeric ratio	X-ray [ORTEP and CIF in SI*]	⇩	Copy of 1H/13C NMR spectrum in SI*	Copy of chromatogram in SI*	Quant. GC, HPLC, electrophoresis	Elemental analysis	⇩	Cartesian coordinates or Z-matrix	# of imaginary frequencies	Total energy	(* SI = Supporting Information)



讲好一个故事

- Why do it？ How to do？
- What's New？ Who care？
- 研究工作的方法与过程
- 分享实验结果并使之可重复
- SCI论文的架构

Title

Author List

Abstract and Graphic

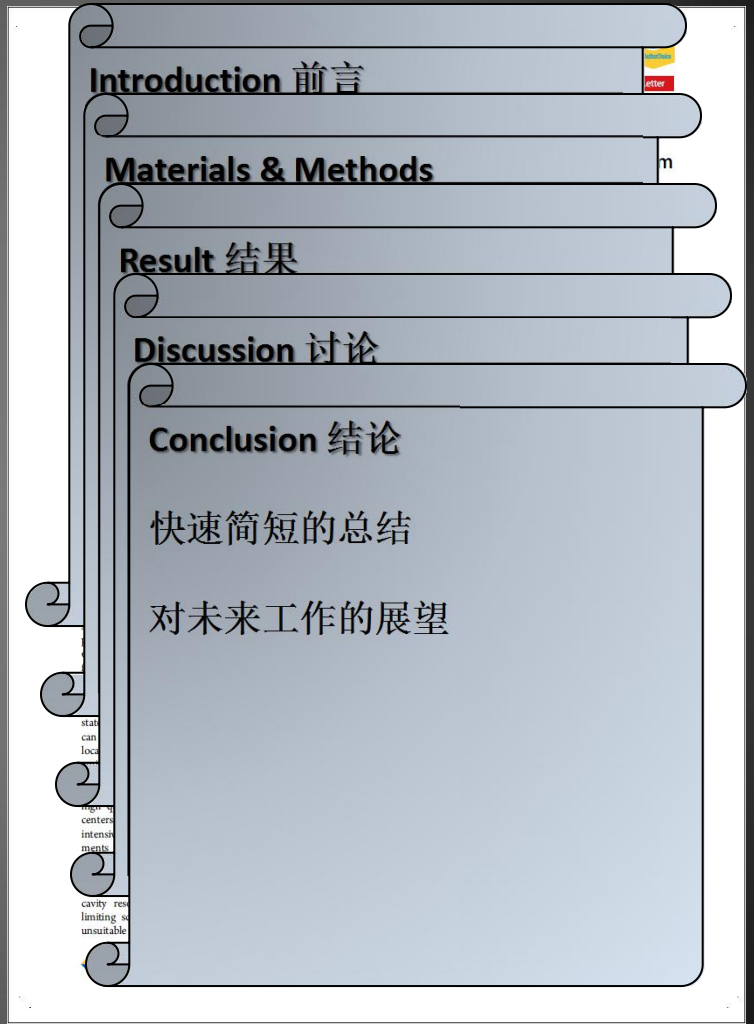
Main Text

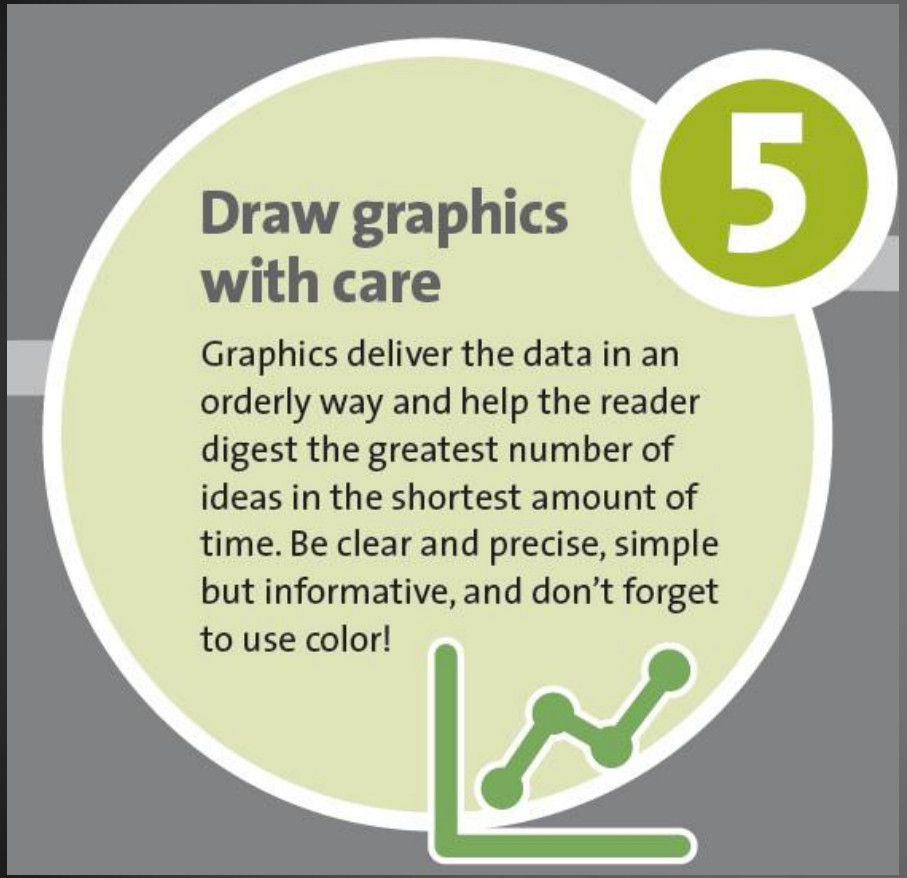
Supporting Info

Author Information

Acknowledgement

References



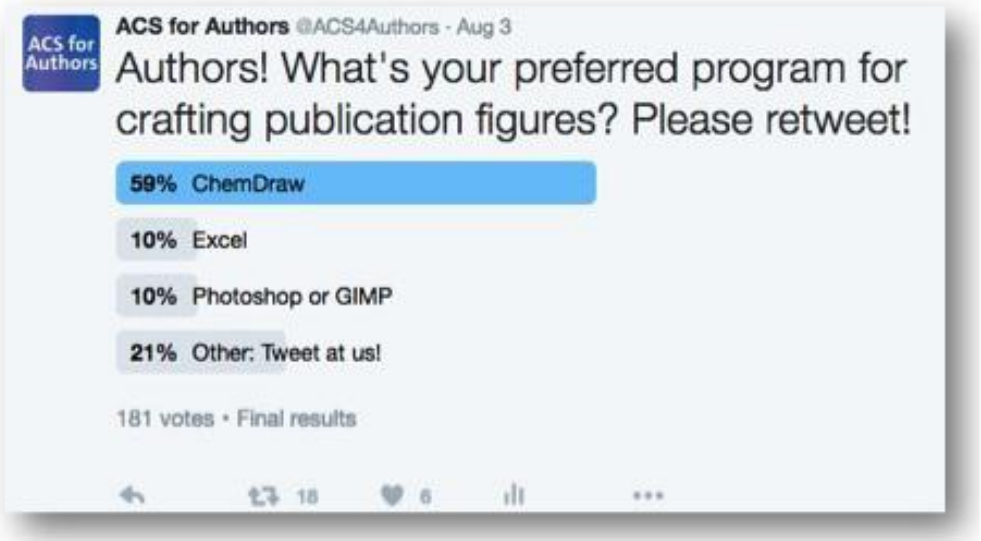


仔细认真绘制图表

- 图表质量：**Quality**
- 图表信息：**Meaningful**
- 文字部分的有力补充
- 编号、描述、鼓励上色
- 作者原创、未经出版

ChemDraw 化学绘图软件

Free Resources for Creating Chemistry Figures for Journal Publication



如何起一个好的标题

- **Attractive**
  Meaningful
  Informative
  Not too long
  最重要的是发现了什么

- **避免无意义或不客观的词汇**
  比如 only，first ……

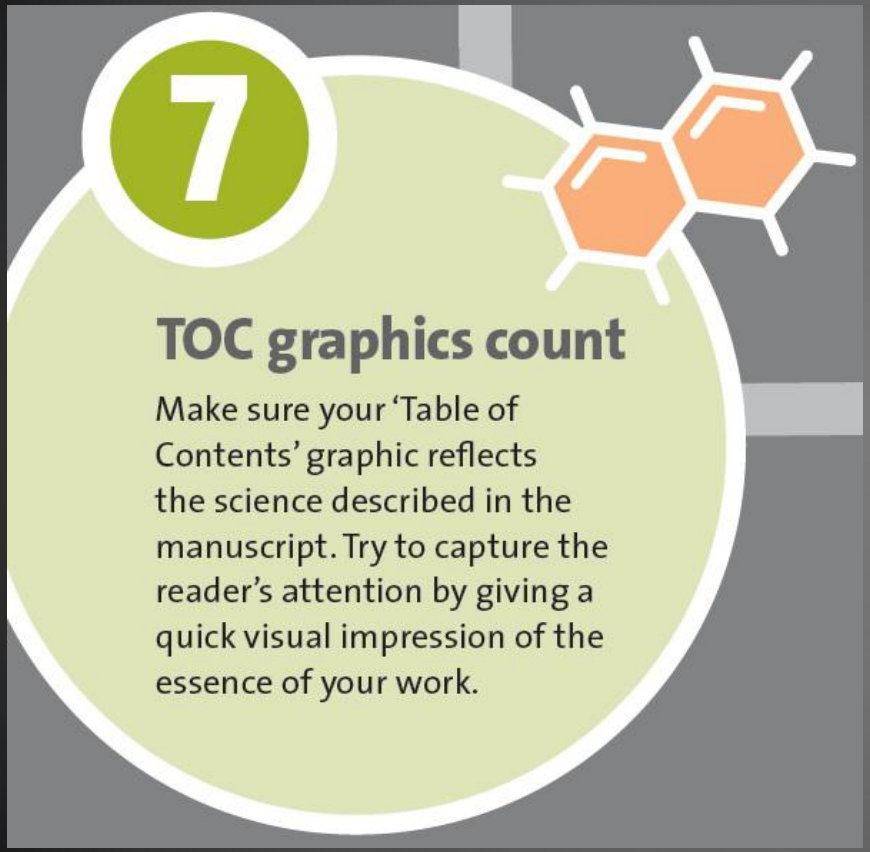
For Example:

Mechanism of Catalytic Oxidation of Styrenes with Hydrogen Peroxide in the Presence of Cationic Palladium(II) Complexes
J. Am. Chem. Soc., 2017, 139 (36), pp 12495–12503

Radical Route to 1,4-Benzothiazine Derivatives from 2-Aminobenzenethiols and Ketones under Transition-Metal-Free Conditions
Org. Lett., 2016, 18 (24), pp 6424–6427

11-Step Total Synthesis of Pallambins C and D
J. Am. Chem. Soc., 2016, 138 (24), pp 7536–7539

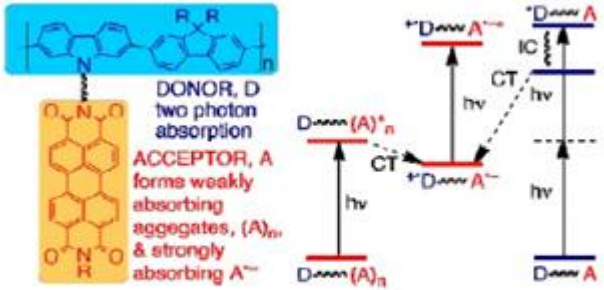
Cu and Cu-Based Nanoparticles: Synthesis and Applications in Catalysis
Chem. Rev., 2016, 116 (6), pp 3722–3811



绘制
TOC / Abstract Graphics

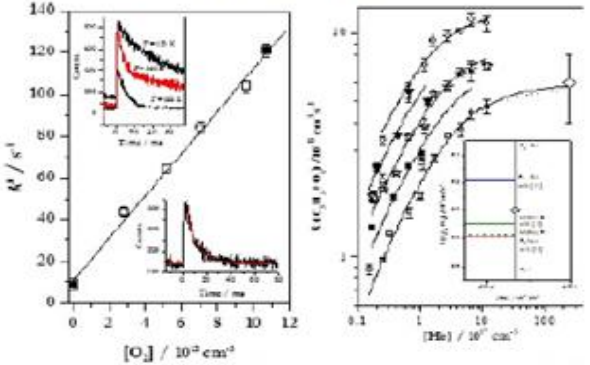
- **Simple，Informative**
- **Original，Unpublished**
- 不要包含其它图片、计算、章印、商标 ……
- 避免使用文章中出现过的图

GOOD GRAPHICS



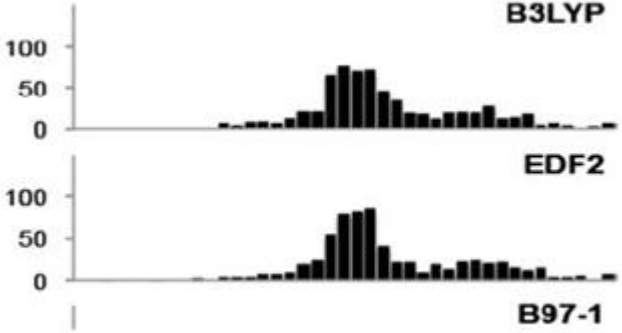
This graphic has a good balance of images and description. All of the type is crisp and easy to read.

POOR GRAPHICS

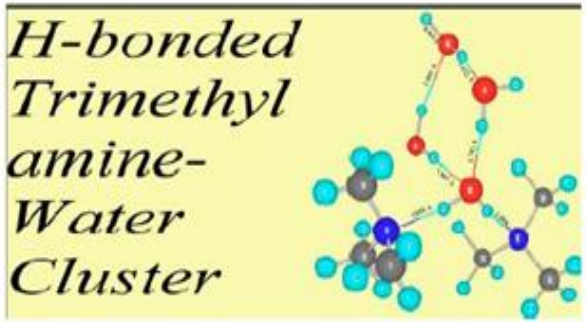


Graphic is very cluttered and most of the fonts are too small or faint to be readable.

POOR GRAPHICS



Graphic is uninteresting and not informative.



The font is too big, the image says nothing about the article, and the type on the image is unreadable.

Article

Mechanism of Catalytic Oxidation of Styrenes with Hydrogen Peroxide in the Presence of Cationic Palladium(II) Complexes

J. Am. Chem. Soc., Article ASAP
DOI: 10.1021/jacs.7b05413
Publication Date (Web): August 29, 2017
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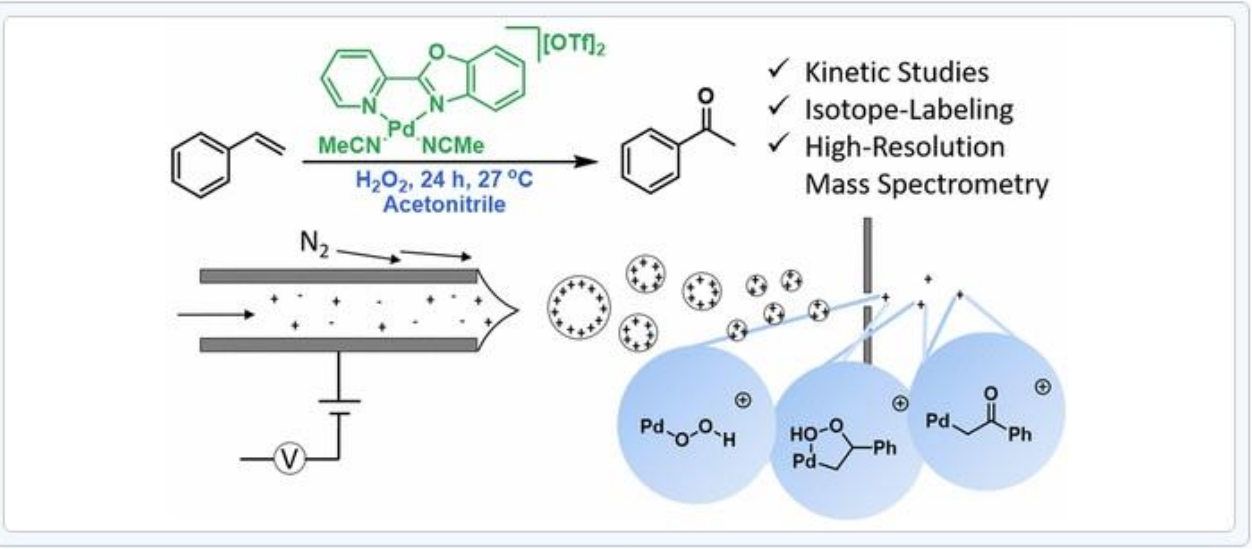
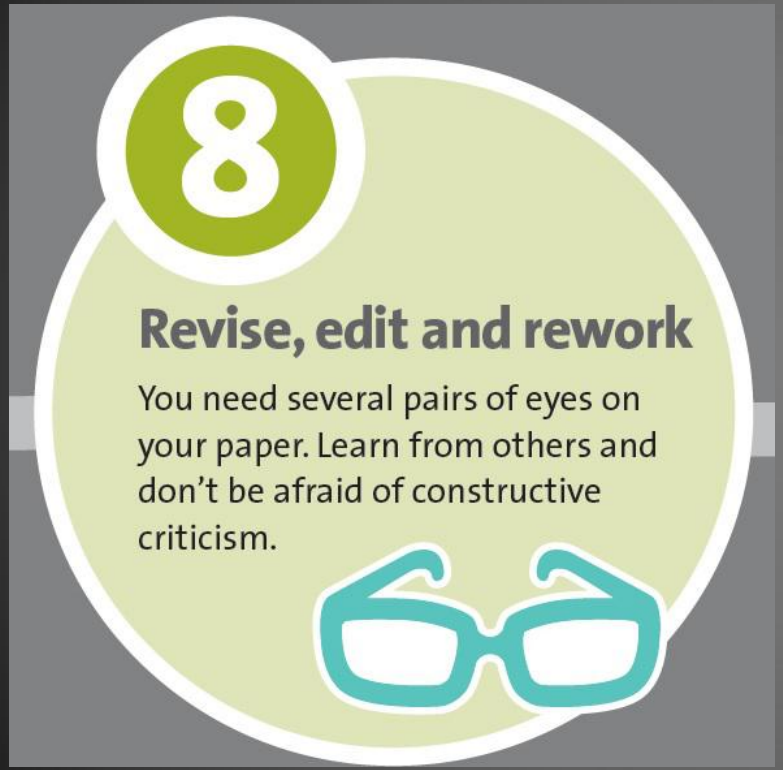
Abstract





语言的修改和编辑

- 阅读积累专业英语词汇
- 英语和母语的习惯
- 自我修改和编辑
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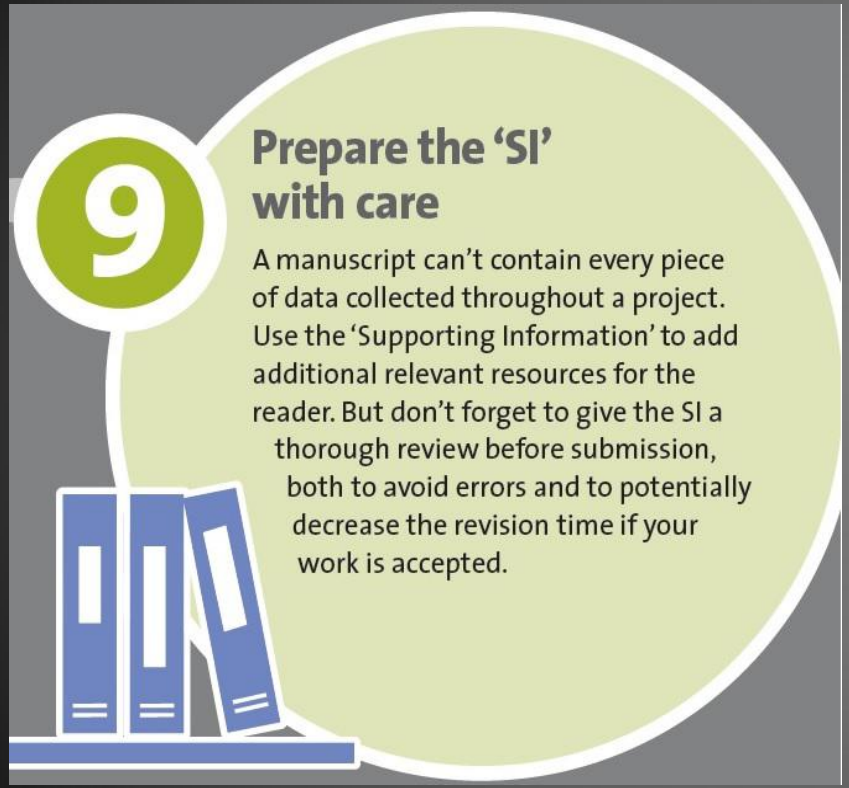

精心准备
Supporting Information

- 文章正文不必堆砌所有数据
- 给编辑和评审人提供精确和必要的实验步骤与数据
- 给读者提供重要的帮助信息
- 注意 Checklist 的要求

Write a strong cover letter

10

A well written cover letter highlights the relevance and importance of your work, explains why the work is appropriate for the journal's readership, and will leave editors wanting to find out more. Include specifics like the editor's name and the journal's name, and keep your letter to under one page.

向期刊的编辑致辞

Dear Professor Bertozzi

写上投稿的标题，并提及期刊名

We wish to submit our manuscript "TITLE" for publication in *ACS Central Science*.

高亮您研究工作的重点和亮点

We describe a new, non-natural enzyme-catalyzed reaction, aziridination of olefins via intermolecular nitrene transfer.

We discovered that a variant of cytochrome P450BM3 used in our previous studies of intermolecular sulfimidation also catalyzes aziridination.

We were able to improve this activity more than 50-fold and the enantioselectivity of enzyme-catalyzed aziridination was improved to 99% ee for a range of styrenyl substrates.

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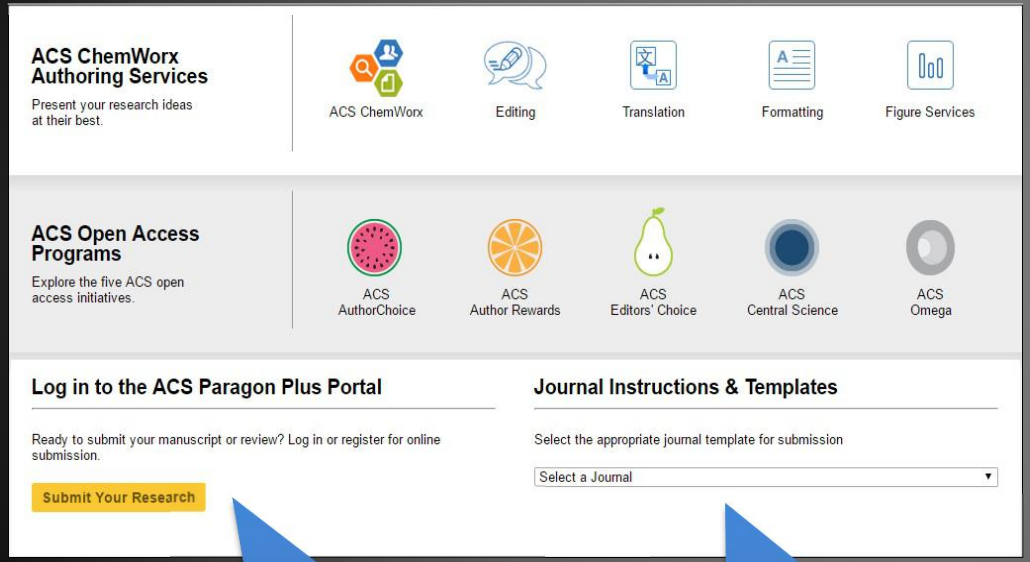

投稿平台
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选择期刊的
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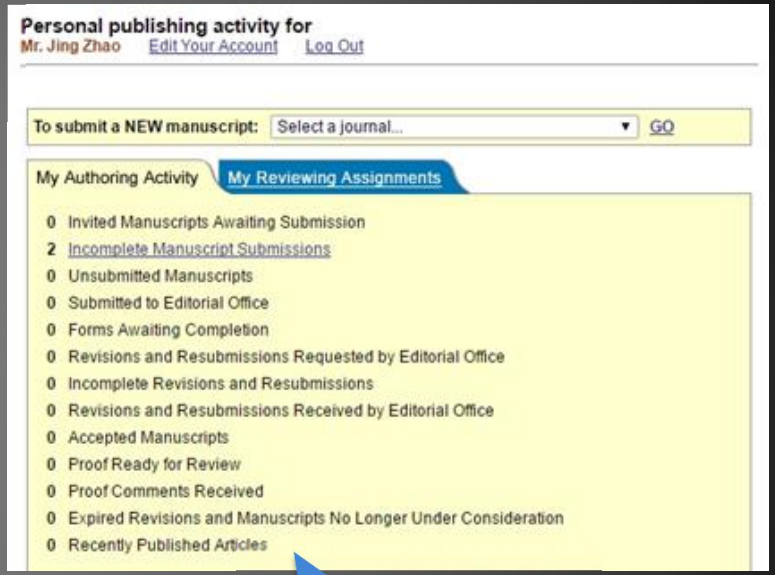
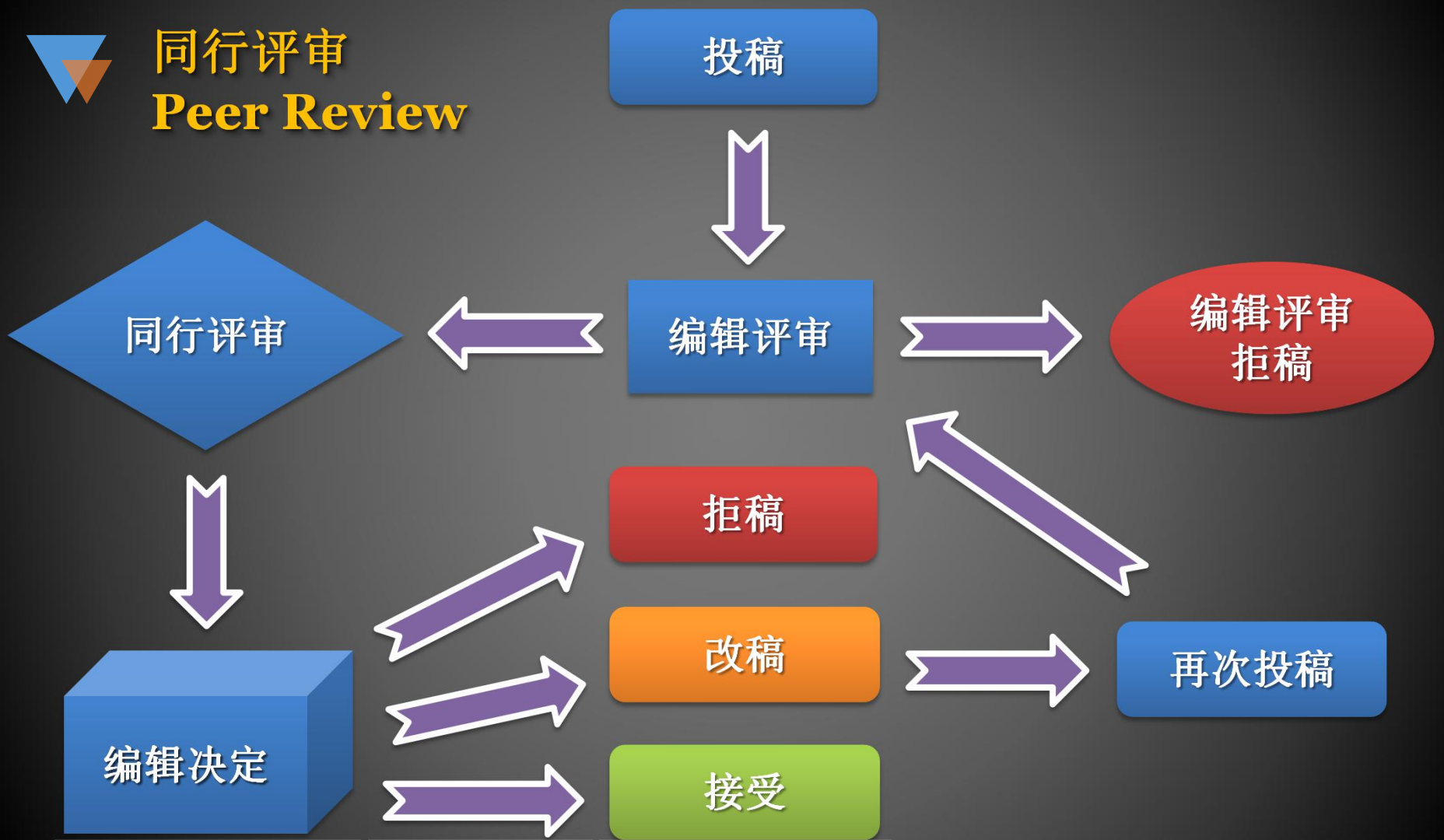
投稿模板



查阅稿件状态


同行评审
Peer Review
投稿
同行评审
编辑评审
编辑评审
拒稿
拒稿
改稿
再次投稿
编辑决定
接受

同行评审过程中可能遇到的问题：

- 期刊收到新稿件后如何分配编辑？
- 编辑如何评判收到的稿件？
- 作者如何选择审稿人？
- 编辑如何选择审稿人？
- 编辑如何对稿件做一个最终决定？

作者收到审稿意见后的处理方式：

- 谁来接收和处理审稿意见？
- 作者如何看待评审人的意见？
- 作者如何回应评审人的意见？
- 遇到拒稿后该怎么办？
- 如何看待申诉决定？


Q & A

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