ACS数据库培训讲座报告主题

1. ACS出版物概况介绍
2. ACS数据库平台功能介绍与使用
3. ACS期刊投稿流程与注意事项
4. 化学类科研课题文献资料检索技巧与经验

主题一：ACS 出版物概况介绍

ACS（American Chemical Society)

ACS (美国化学学会) 成立于**1876**年，现已成为世界上最大的科技学会之一。

ACS 一直致力于为全球化学科研机构、企业及个人提供高品质的文献资讯及服务。

ACS出版物内容（至2016年为止)：

50种高影响力期刊
2种 OA 期刊 (可开放获取)
1400多本经过同行评审的电子图书
C&EN《化学化工新闻》杂志

主题一：（1）ACS出版物期刊及分类介绍

ACS期刊品质：

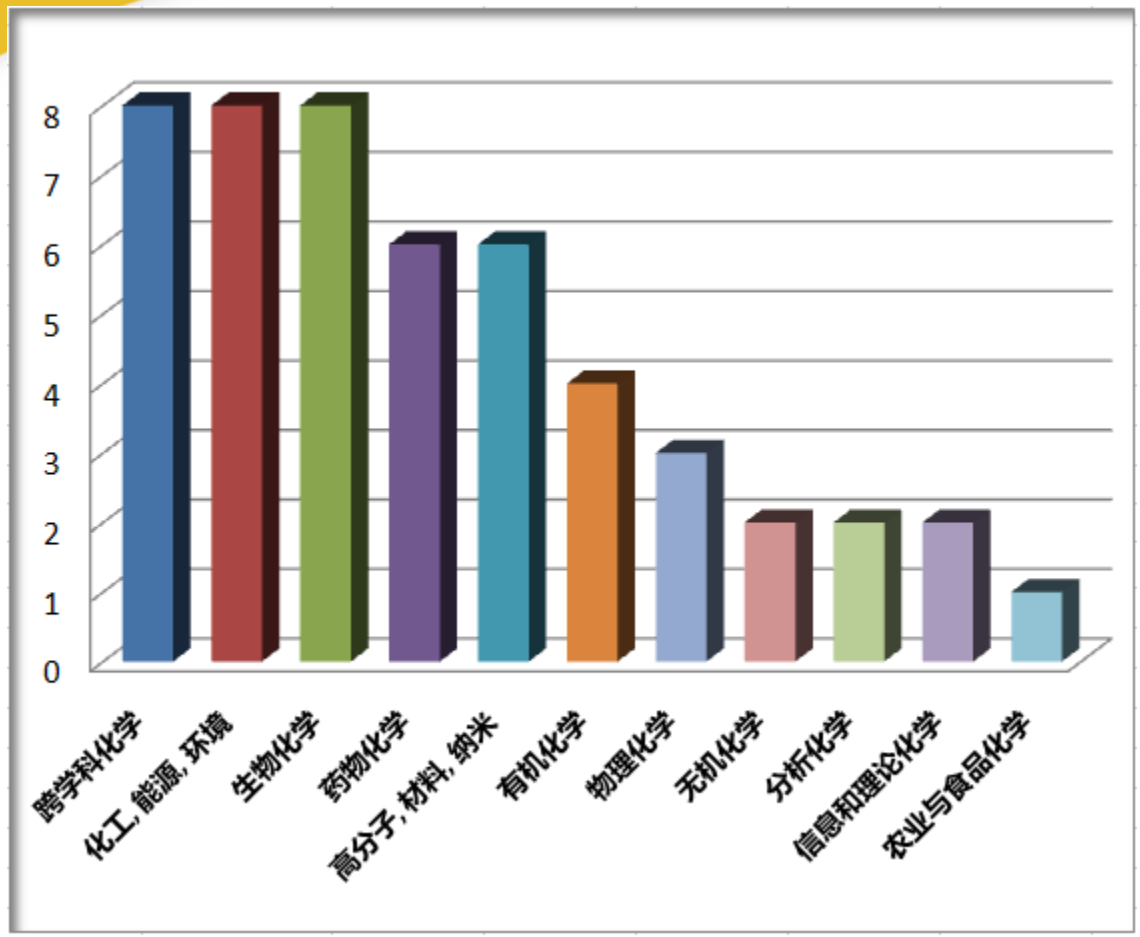
ACS期刊被引用次数超过 **270万**，根据2015年期刊引用报告 (JCR)， 被誉为“化学领域中被引用次数最多的期刊”

有**46**种ACS期刊被SCI 收录
有**21**种ACS期刊的影响因子超过**5**

ACS期刊涉及的学科：

经典化学，化工，能源，环境科学，生物化学，药物化学，材料科学，纳米技术，农业与食品化学等

主题一：（1）ACS出版物期刊及分类介绍



学科分类	期刊数量
跨学科化学	8
化工, 能源, 环境	8
生物化学	8
药物化学	6
高分子, 材料, 纳米	6
有机化学	4
物理化学	3
无机化学	2
分析化学	2
信息和理论化学	2
农业与食品化学	1

ACS期刊涵盖**20**多个与化学有关的学科，主要包括以上的学科分类，并且有**8**种跨学科化学期刊。

主题一：（1）ACS出版物期刊及分类介绍

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《美国化学会会志》 JACS JOURNAL OF THE AMERICAN CHEMICAL SOCIETY

- 作为跨学科化学期刊，用户可以在JACS找到各大化学相关学科的顶尖研究。

- 2015年 影响因子IF
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- 2015年 总被引量
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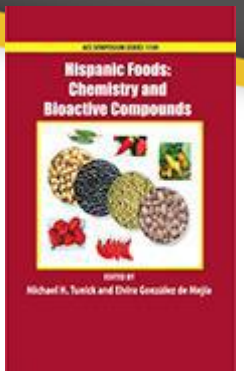
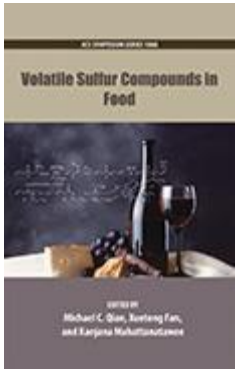
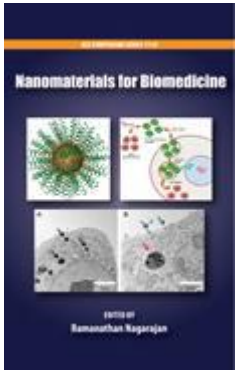
- 2015年 文章发表量
  2,379

http://pubs.acs.org/journal/jacsat

主题一： (2) ACS电子图书简介







ACS数据库包含1400多本同行评审电子书，涵盖食品生产、新型材料、绿色化工、化学教育、化学信息学等多个应用领域，记录了半个多世纪的化学发展历程和最新技术成果，被誉为“资讯的金矿”。既可为化学科研及从业人员提供参考，又可为化学教育和学科建设提供素材和范例。

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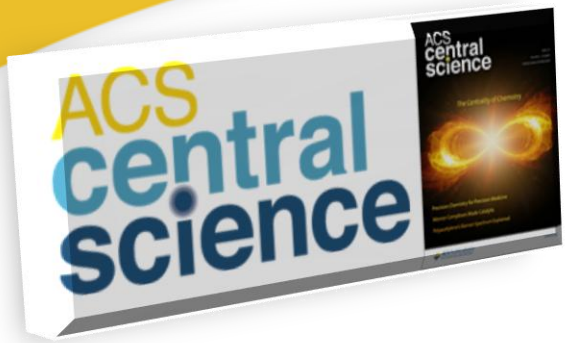
http://pubs.acs.org/series/advances

主题一： (2) ACS电子图书简介

学科领域	ACS 部门主办方	电子书数量	适用的国内学科
生物、医药	BIOT 生物技术、 ANLY 分析化学、 CINF 化学信息学等	16000章 (超过400本)	生物医学工程、药剂学、 计算机应用技术
环境、农业	ENVR 环境科学、 AGRO 农学、 AGFD 农业和食品科学等	超过14000章	有机化学、食品科学、 植物学、毒理学
工业、材料	I&EC 无机化学和化工研究 POLY 高分子化学、 PMSE 高分子材料科学	10000章 (超过300本)	工业催化、凝聚态物理、 材料加工工程、材料科学
物理、天文	HIST 化学史、 PHYS 物理化学等	3000章	原子和分子物理、 放射化学、核技术
地质、能源	GEOC 地球化学、 FUEL 燃料化学	1900章	石油与天然气工程
其他(教育学、 经济学)	CHED 化学教育、 HIST 化学史 SCHB 小型化学企业等	1500章	化学(师范)

主题一： (3) Open Access 期刊介绍



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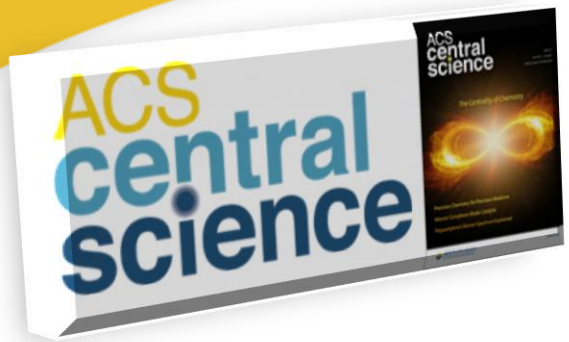

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First Reaction	科技时评
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生物制药

材料科学与纳米技术

环境与能源科学

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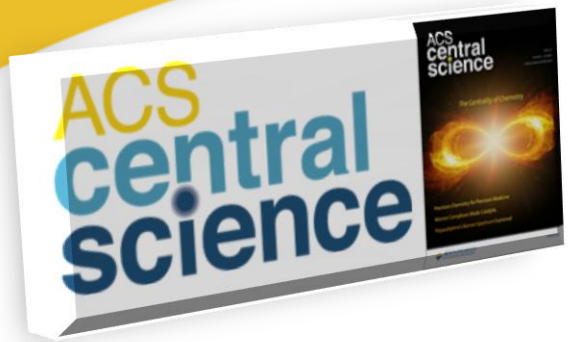
主题一：(3) Open Access 期刊介绍



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主题一：(3) Open Access 期刊介绍

O = Open Access
M= Multidisciplinary
E = Expedited Publication
G = Global Community
A = ACS

《ACS欧米伽》

- 四位来自世界各地的主编，其中有中科院化学研究所所长张德清教授！
- ACS的第二种OA刊，特点是审稿流程快。期刊范围涉及化学及各种跨学科领域的交流
- 根据ACS出版社的统计，每年收到的12万投稿中，只有约4万能被最终发表！
- 很多被拒稿件在实验方法、数据、结论和行文等方面都没问题，只因研究的重要性或创新性没有达到其他更权威期刊的期许。

主题一： (3) Open Access 期刊介绍

《ACS欧米伽》

来自中国，印度，欧洲，美洲的四名共同主编

ACS Omega 的期刊特点

1. 全球性
2. 资源开放
3. 快速审稿与出版

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Prof. Deqing Zhang

中国科学院化学研究所所长

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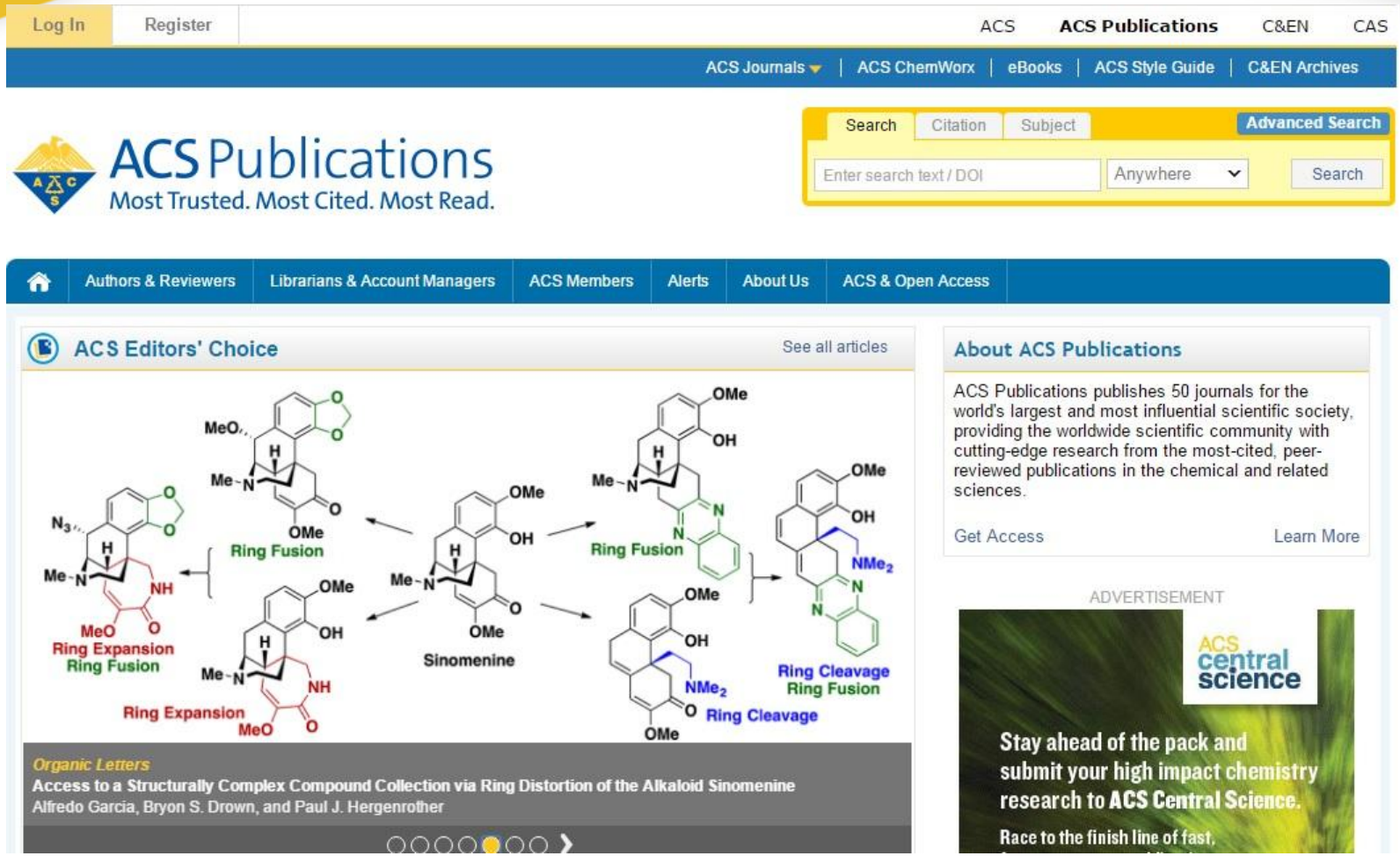

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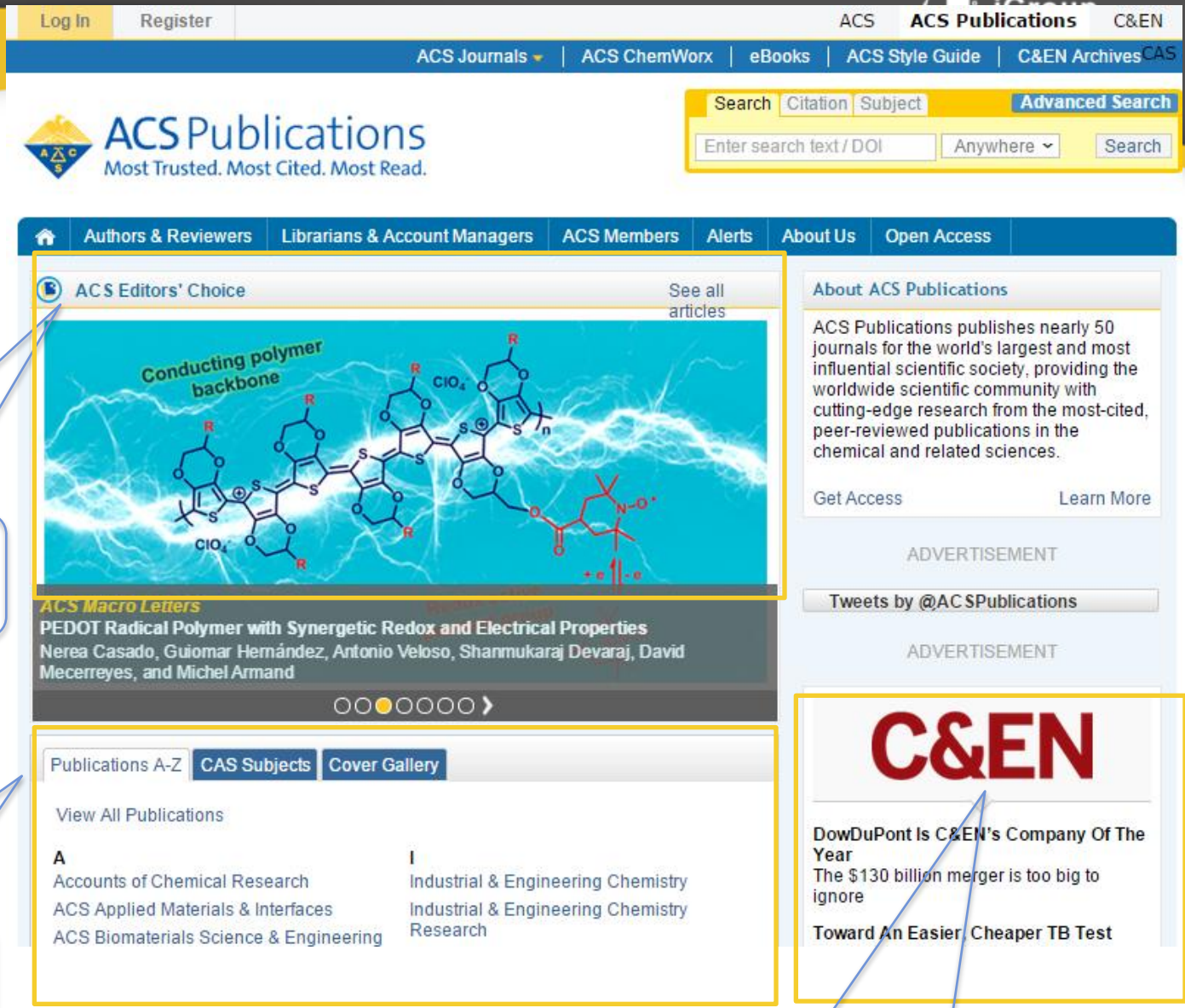

Editors Choice栏目：精选文献

ACS全部刊物：可查看15、16年新刊

化学工程新闻快报

导航栏和检索栏


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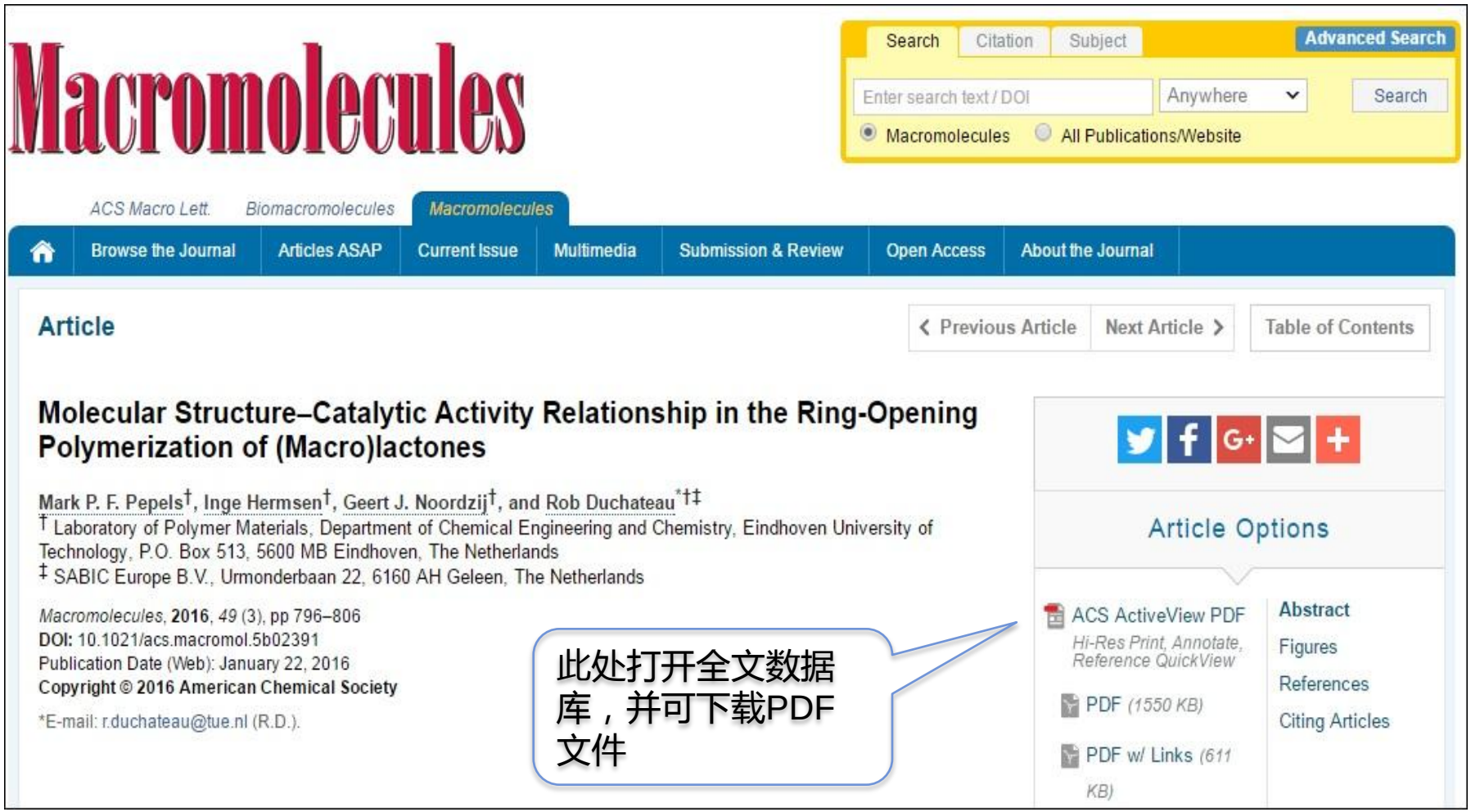
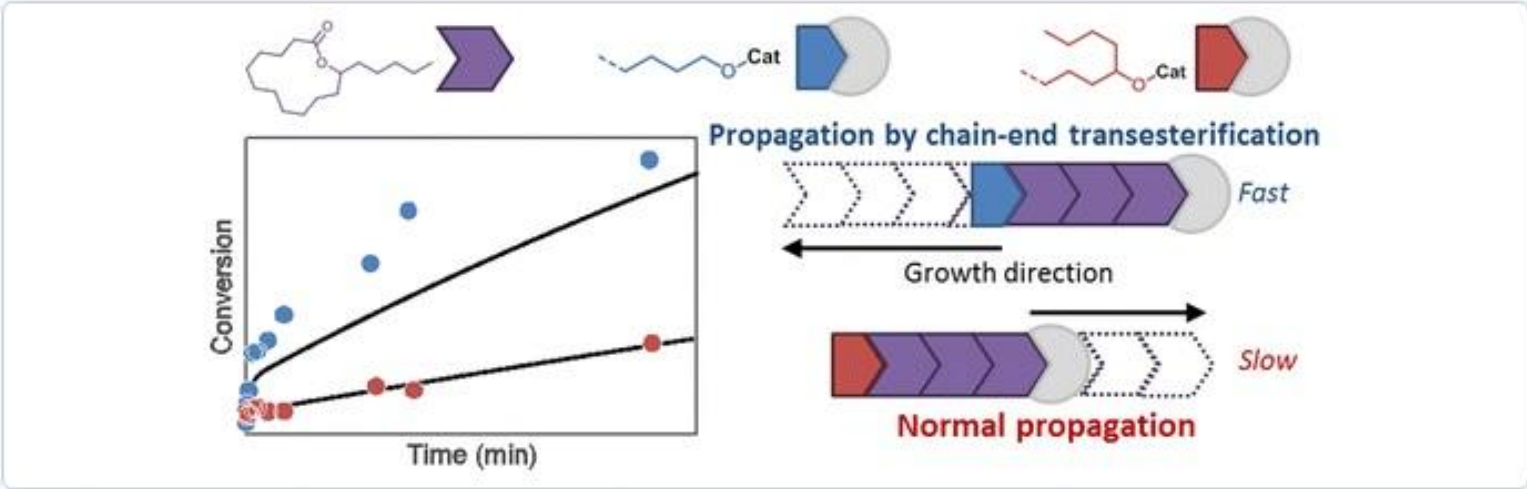
文章的标题，作者，期刊卷期，DOI号



文摘 Abstract

Abstract



A kinetic analysis on the aluminum salen-catalyzed ring-opening polymerization (ROP) of (macro)lactones is presented, which focuses on how chain transfer agents and the steric hindrance at the α-methylene groups of both the growing chain and the (macro)lactones affect the polymerization rate. It is shown that for branched macrolactones the choice of initiator does not only influence the initiation rate but surprisingly also the apparent rate of polymerization. The increased polymerization rate, when an unbranched initiator was used, was ascribed to transesterification reactions taking place at the polymer chain end, which effectively results in an unprecedented chain growth *at the other end* of the polymer chain compared to normal ROP. Furthermore, application of a kinetic model including initiation, propagation, and transesterification led to the ability to accurately quantify the effect of steric hindrance for various alkoxide initiators by determining individual rate constants for initiation. It appeared that

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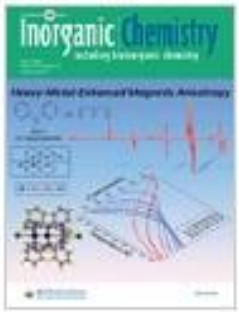

A Comparative Study on Dinuclear and Mononuclear Aluminum Methyl Complexes Bearing Piperidyl–Phenolato Ligands in ROP of Epoxides
Wenyi Li, Hao Ouyang, Lijuan Chen, Dan Yuan, Yong Zhang, and Yingming Yao
Inorganic Chemistry **2016** *55* (13), 6520-6524
Abstract | Full Text HTML | PDF | PDF w/ Links

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Traceless switch organocatalysis enables multiblock ring-opening copolymerizations of lactones, carbonates, and lactides: by a one plus one approach in one pot
Xin Wang, Jiaqi Liu, Songquan Xu, Jiaxi Xu, Xianfu Pan, Jingjing Liu, Saide Cui, Zhenjiang Li, Kai Guo
Polym. Chem. **2016** ,

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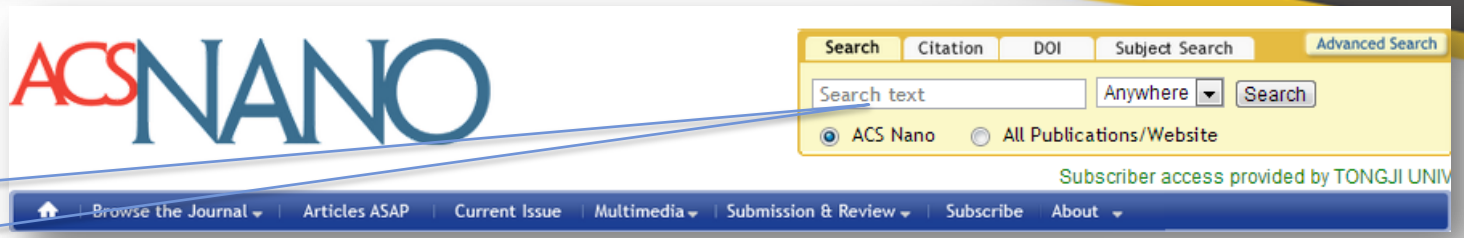

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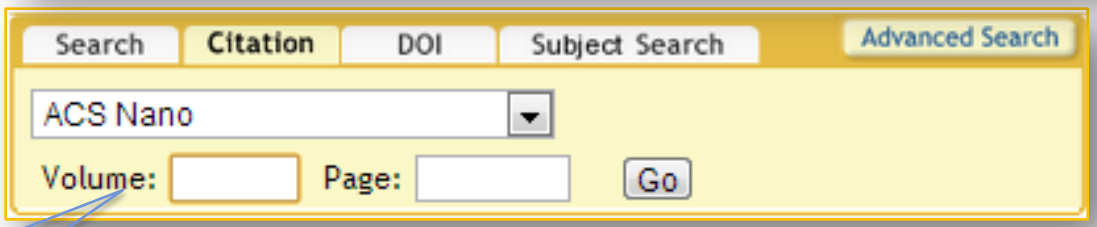

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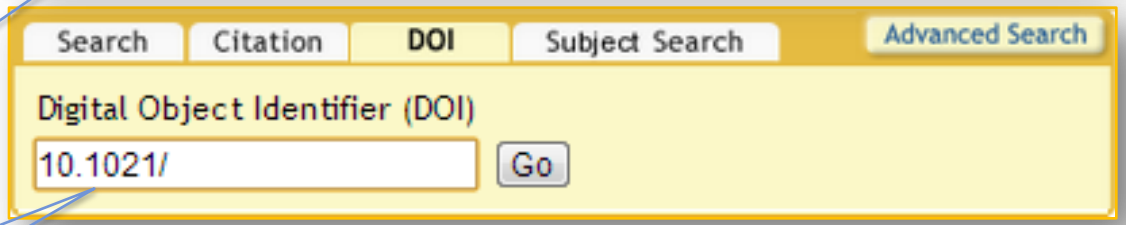

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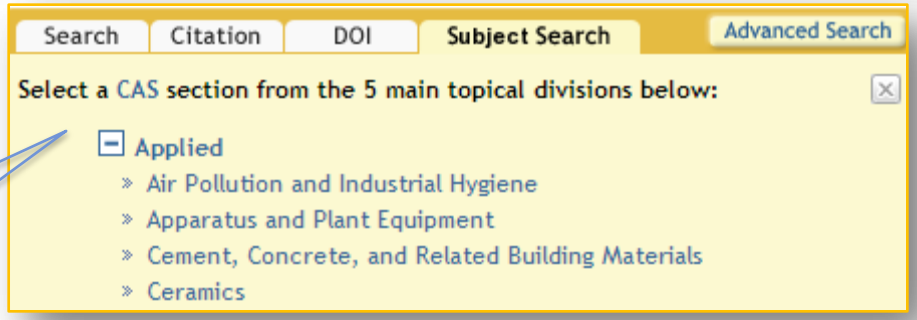

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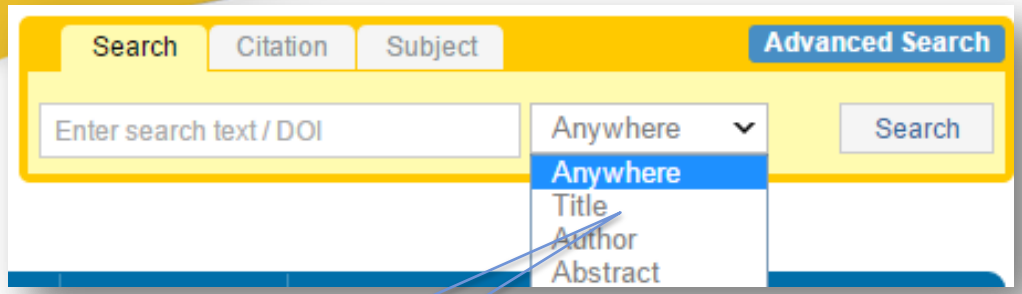

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Author >> 文章作者

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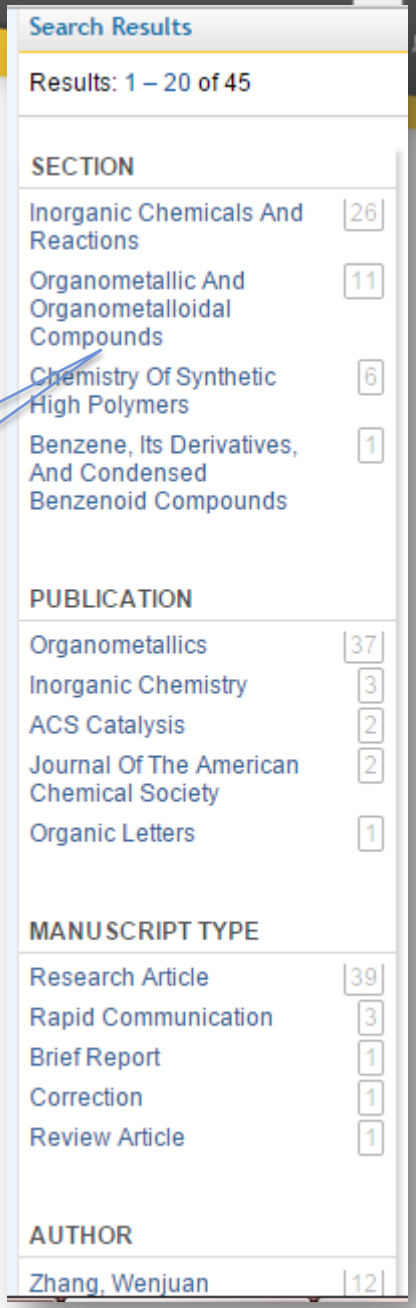

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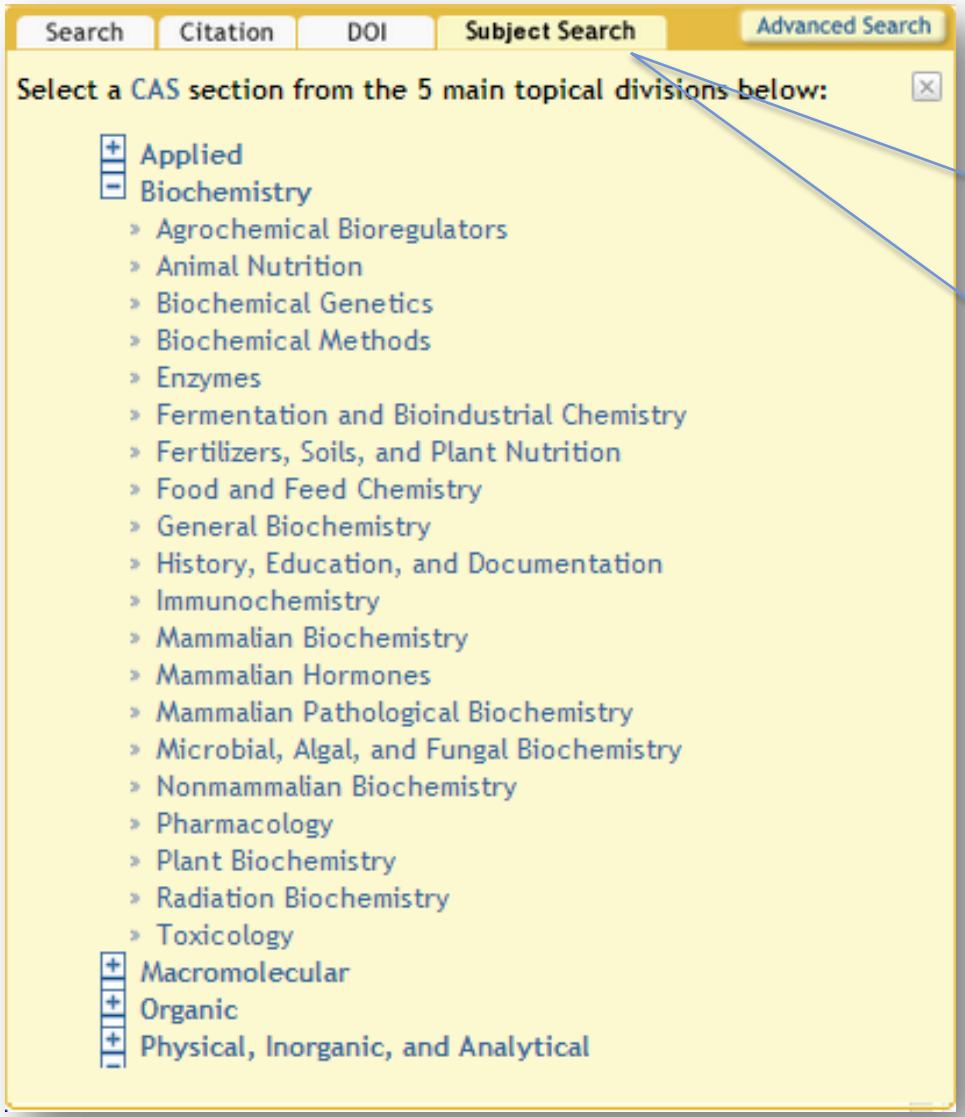

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ACS期刊投稿流程

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主题三：ACS期刊投稿流程和注意事项

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- Abstract
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NANO LETTERS

Letter

pubs.acs.org/NanoLett

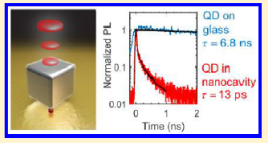
Ultrafast Room-Temperature Single Photon Emission from Quantum Dots Coupled to Plasmonic Nanocavities

Thang B. Hoang,[†,‡] Gleb M. Akselrod,[‡,§] and Maiken H. Mikkelsen*[,†,‡,§]

[†]Department of Physics, [‡]Center for Metamaterials and Integrated Plasmonics, and [§]Department of Electrical and Computer Engineering, Duke University, Durham, North Carolina 27708, United States

Supporting Information

ABSTRACT: Efficient and bright single photon sources at room temperature are critical components for quantum information systems such as quantum key distribution, quantum state teleportation, and quantum computation. However, the intrinsic radiative lifetime of quantum emitters is typically ~10 ns, which severely limits the maximum single photon emission rate and thus entanglement rates. Here, we demonstrate the regime of ultrafast spontaneous emission (~10 ps) from a single quantum emitter coupled to a plasmonic nanocavity at room temperature. The nanocavity integrated with a single colloidal semiconductor quantum dot produces a 540-fold decrease in the emission lifetime and a simultaneous 1900-fold increase in the total emission intensity. At the same time, the nanocavity acts as a highly efficient optical antenna directing the emission into a single lobe normal to the surface. This plasmonic platform is a versatile geometry into which a variety of other quantum emitters, such as crystal color centers, can be integrated for directional, room-temperature single photon emission rates exceeding 80 GHz.



KEYWORDS: *Plasmonics, quantum dots, nanocavity, nanocube, single photon source, quantum optics*

The most common way to generate single photons is to use spontaneous emission from a two-level system, which cannot emit more than one photon simultaneously.[1,2] Typical two-level solid state systems used as single photon sources include molecules,[3] colloidal[4,5] and epitaxial quantum dots (QDs),[6,7] and color centers in crystals such as diamond[8−10] and silicon carbide.[11] A number of factors limit the maximum photon count rate from these emitters including low collection efficiency and low quantum yield. However, the most fundamental limitation on the maximum photon rate is the relatively long intrinsic lifetime (~2−20 ns) of the electronic excited state of typical emitters.

To increase the spontaneous emission rate of the excited state, and hence the maximum single photon rate, the emitter can be placed in a photonic environment with an increased local density of optical states.[12] This increased spontaneous emission rate, known as the Purcell effect, can be achieved by integrating the emitter into an optical cavity with either a small mode volume or a high quality factor (Q). Microcavities with high quality factors have been coupled to nitrogen vacancy centers in diamond[10,13] and epitaxial QDs.[14−16] Yet, despite intensive efforts in the past decade, the maximum enhancements in the spontaneous emission rate (Purcell factors) for single emitters have been limited to $F_p \approx 30$. In addition to the limited enhancements, high-Q cavities require good spectral matching between a narrowband emitter and the narrowband cavity resonance, involving challenging nanofabrication and limiting scalability, and hence high-Q cavities are inherently unsuitable for broadband room temperature emitters.

Alternatively, quantum emitters can be integrated with plasmonic structures, which can offer small optical mode volumes while having a relatively low Q, which avoids the challenge of spectral matching the emitters to the cavity. Single photon emitters coupled to plasmonic structures have been demonstrated using molecules,[17] nitrogen-vacancy centers in nanodiamonds,[8] diamond pillars,[9] epitaxial QDs,[18] and colloidal QDs.[5,19,20] However, as with dielectric cavities, the Purcell factors for single emitters have thus far been limited to ~30 due to relatively large mode volumes. Larger enhancements in the total decay rate have been observed, but the role of radiative rate enhancement is unclear[21] or the nonradiative quenching is dominant.[20] A promising geometry that has been theoretically proposed as a single photon source is the plasmonic patch antenna,[22] which consists of a flat metal nanoparticle situated over a metal ground plane. This structure has been used for large Purcell enhancement of ensembles of molecules,[23] ensembles of QDs,[24,25] and few or single QDs showing multiphoton emission;[26] however, single photon emission has remained an outstanding challenge until now.

Here, we report ultrafast spontaneous emission with a lifetime of ~10 ps from a single QD coupled to a plasmonic structure that acts both as a small mode volume nanocavity and a nanopatch optical antenna. This emission lifetime corresponds to a detector-limited 540-fold enhancement in the

Received: September 15, 2015
Revised: November 20, 2015
Published: November 25, 2015

DOI: 10.1021/acs.nanolett.5b03724
Nano Lett. 2016, 16, 270−275

投稿的文章主体部分

Title 标题： 清晰，简明，反应内容和重点，避免不恰当词汇

Author List 作者列表： 所有实质性贡献的工作者，并确定通讯作者

Abstract 文摘： 文章中最重要的结果和结论

Body Text 正文： 包括引言，结果，结论，实验部分

Acknowledgement 鸣谢： 资金支持，技术帮助，同行建议等

Supporting Info 帮助信息： 实验数据信息 Checklist

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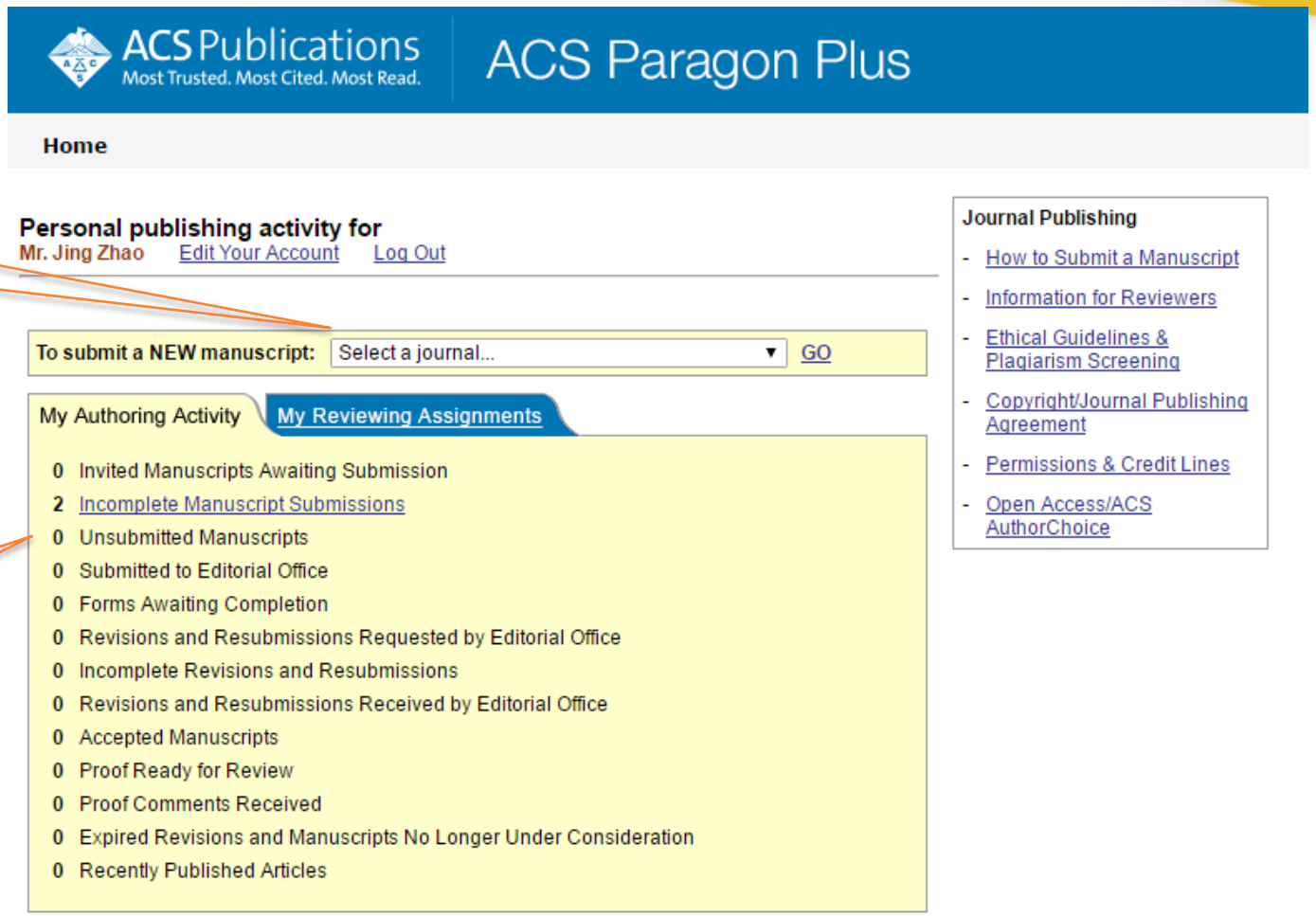

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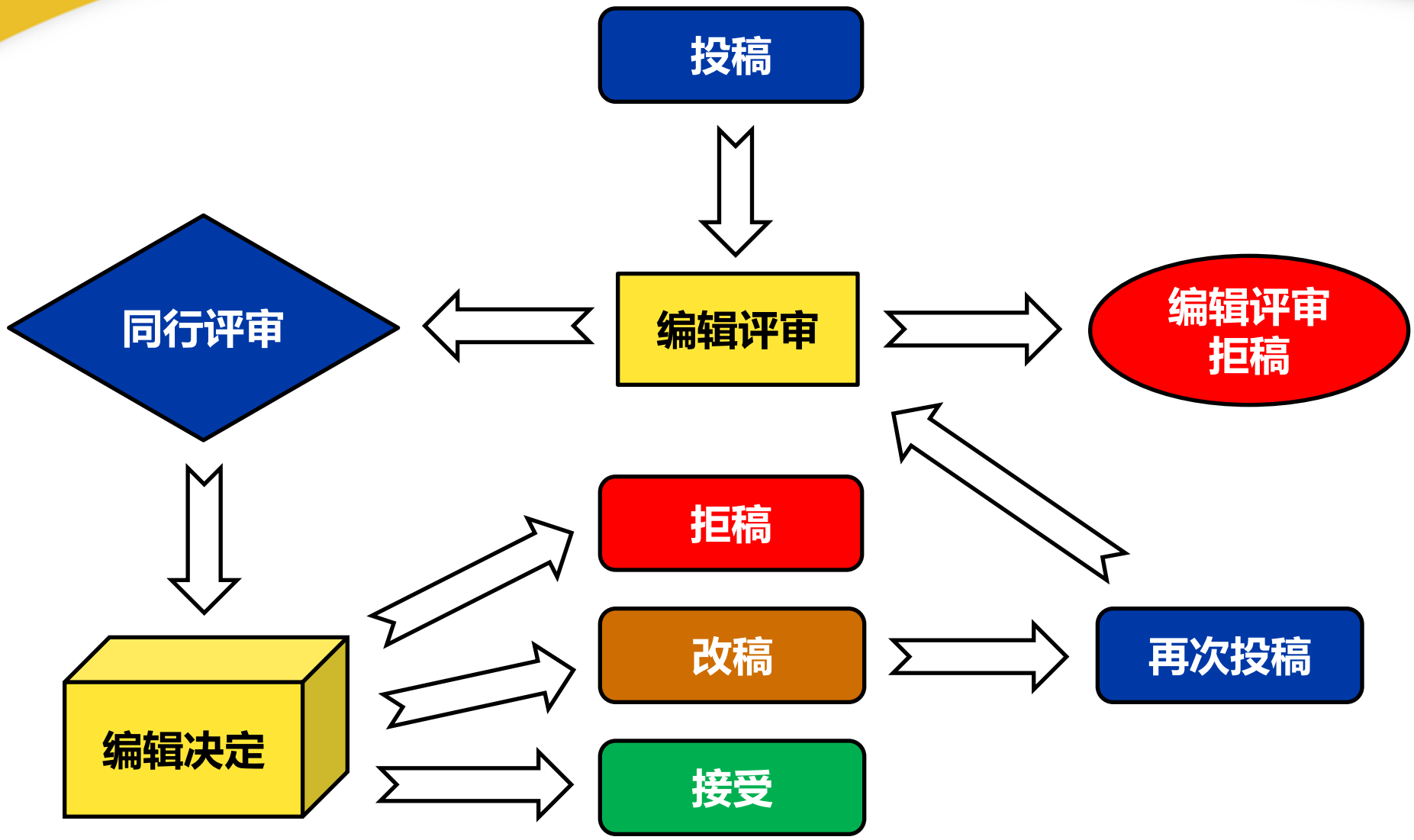

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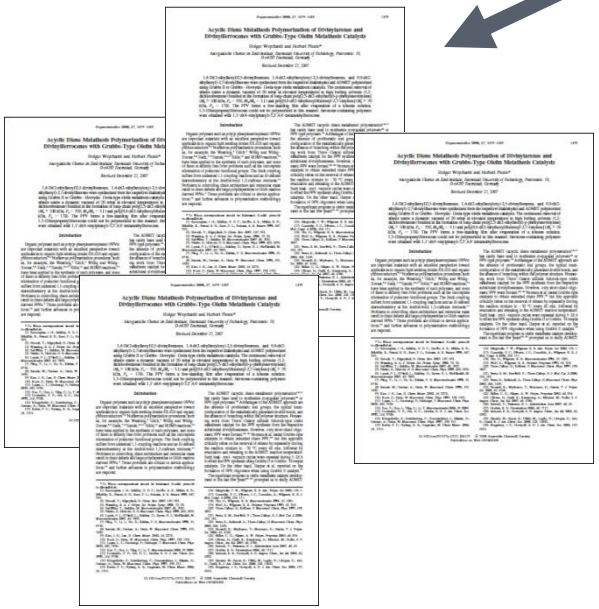

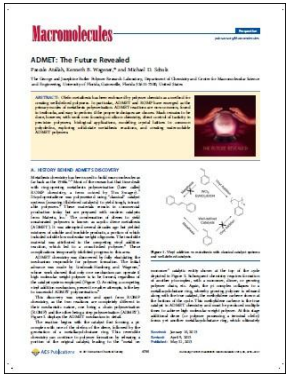

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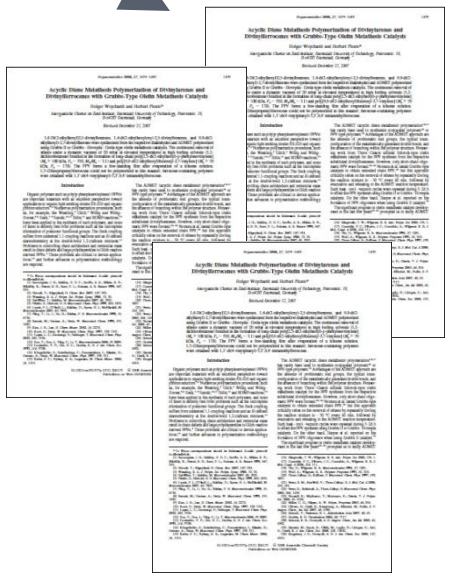

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