



Springer Nature
--专注科学，贡献科学

孙红涛 Arthur Sun

Springer Nature 大中华区客户发展经理

2024年 CALIS 培训周 天津

SPRINGER NATURE

Springer
电子期刊

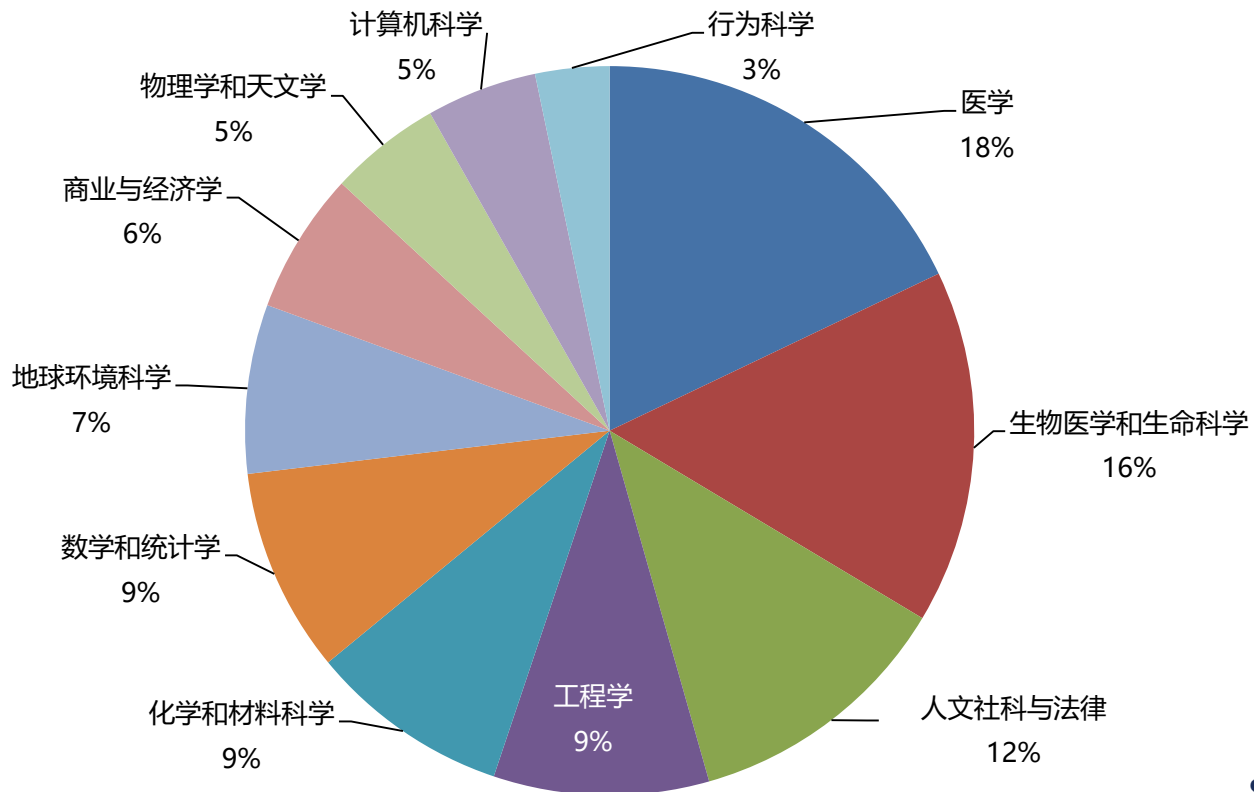
Springer电子期刊

- Springer 电子期刊数据库收录期刊3000多种
- 60%以上被SCI和SSCI收录
- 随时出版, 随时更新
- IP控制, 无并发用户限制
- 与Springer所有电子资源整合, 充分实现链接功能
- 涵盖11个学科, 部分期刊在相关学科有较高排名

Springer电子期刊—学科分类

学科组合 (3大专辑)	子学科 (11个学包)	
Science, Technology and Engineering (STE) 科技工程专辑	Chemistry and Materials Science	化学和材料科学
	Computer Science	计算机科学
	Earth and Environmental Science	地球环境科学
	Engineering	工程学
	Mathematics and Statistics	数学和统计学
	Physics and Astronomy	物理学和天文学
Medicine and Life Science 生物医学专辑	Biomedical and Life Sciences	生物医学和生命科学
	Medicine	医学
Social Science and Humanities 人文社科专辑	Behavioral Science	行为科学
	Business and Economics	商业与经济学
	Humanities, Social Sciences and Law	人文社科和法律

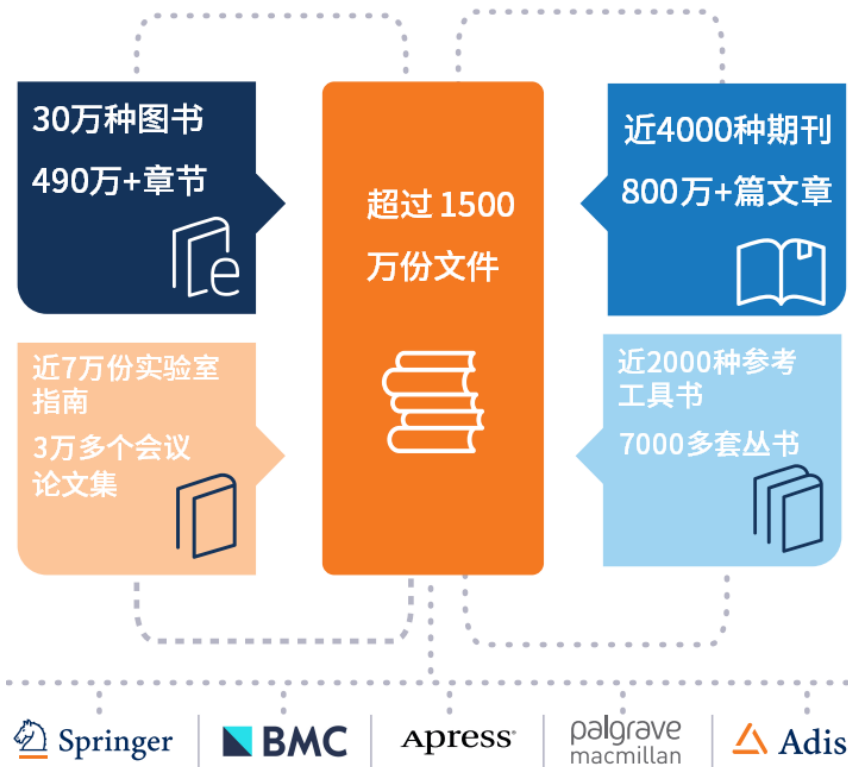
Springer电子期刊—学科分类示意图



link.springer.com

SpringerLink平台

含千万文献的学术资源库



SpringerLink平台提供世界上最全面的**科学、技术和医学以及人文和社会科学**的期刊、图书、丛书、会议论文集、参考工具书和实验室指南等文献资源。通过SpringerLink，您可以快速、准确地访问超过1500万份科学文献，包含Springer、Palgrave Macmillan、Adis、BMC和Apress等备受信赖品牌的出版物。

平台每天都会新增内容，每年增加大约1.2万本电子图书、3千份实验室指南以及超过30万篇期刊论文。

兼具深度与广度的内容，以及完备的检索工具，使SpringerLink平台成为世界各地成千上万科研人员的不二选择。

主页

全新页面, 更好体验

link.springer.com

- 集阅读与出版为一体
- 提升内容发现体验
- 增进个性化作者体验

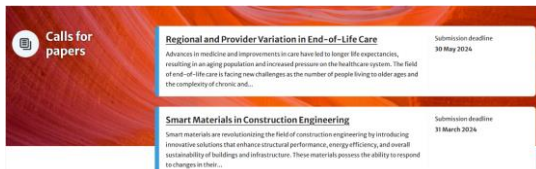
The screenshot shows the Springer Link homepage. At the top, the 'SPRINGER LINK' logo is on the left, and 'Login' is on the right. Below the logo, there are links for 'Find a journal', 'Publish with us', and a search bar. A large search bar in the center contains the text 'Search 15 million articles, journals, books and chapters'. Below this, three statistics are displayed: '200 million monthly downloads', '24 million monthly readers', and '3 million authors submit annually'. The main content area is divided into three columns. The first column is titled 'Home for all research' and is highlighted with an orange callout box. Below this, there are three main sections: 'Discover open access' with a button '探索对OA的支持', 'Publish your research' with a button '出版您的成果', and 'Track your research' with a button '追踪出版进程'. At the bottom, there are three smaller sections: 'Featured articles and journals' with a button '精选期刊与论文', 'Browse by subject' with a button '按照主题浏览', and 'About SpringerLink' with an information icon.

主页

集出版与阅读为一体

尽享研究发表和内容搜索
获取更好的使用体验

投稿征集



Calls for papers

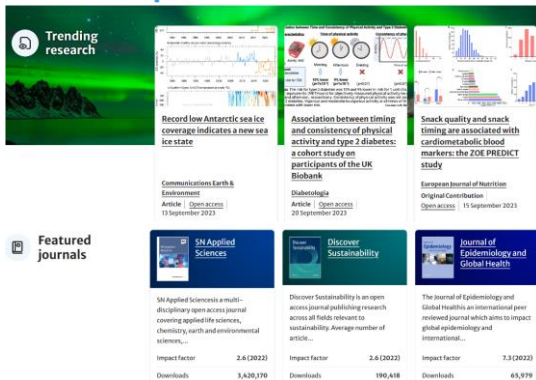
Regional and Provider Variation in End-of-Life Care
Advances in medicine and improvements in care have led to longer life expectancies, resulting in an aging population and increased pressure on the healthcare system. The field of end-of-life care is facing new challenges as the number of people living to older ages and the complexity of chronic and...

Submission deadline
30 May 2024

Smart Materials in Construction Engineering
Smart materials are revolutionizing the field of construction engineering by introducing innovative solutions that enhance structural performance, energy efficiency, and overall sustainability of buildings and infrastructure. These materials possess the ability to respond to changes in their...

Submission deadline
31 March 2024

精选期刊



Trending research

Record low Antarctic sea ice coverage indicates a new sea ice state

Association between timing and consistency of physical activity and type 2 diabetes: a cohort study on participants of the UK Biobank

Snack quality and snack timing are associated with cardiometabolic blood markers: the ZOE PREDICT study

Communications Earth & Environment
Article | Open Access
19 September 2023

Diabetologia
Article | Open Access
28 September 2023

European Journal of Nutrition
Original Contribution
Open Access | 19 September 2023

Featured journals

SN Applied Sciences
SN Applied Sciences is a multi-disciplinary open access journal covering applied life sciences, chemistry, earth and environmental sciences,...

Impact factor 2.6 (2022)
Downloads 3,430,370

Discover Sustainability
Discover Sustainability is an open access journal publishing research across all fields relevant to sustainability. Average number of articles...

Impact factor 2.6 (2022)
Downloads 190,418

Journal of Epidemiology and Global Health
The Journal of Epidemiology and Global Health is an international peer reviewed journal which aims to impact global epidemiology and international...

Impact factor 7.3 (2022)
Downloads 65,979

最新研究：集合Springer、BMC、《自然》系列期刊、Palgrave Macmillan等施普林格·自然旗下优质内容

按学科主题浏览



Browse by subject

- Biological Sciences
- Business and Management
- Chemistry
- Computer Science
- Earth and Environmental Sciences
- Health Sciences
- Humanities and Social Sciences
- Materials Science
- Mathematics

精选图书



Featured books

- An Introduction to Statistical Learning
- The Algorithmic Design Manual
- Hypertension and Cardiovascular Disease in Asia
- Electronics for Beginners
- Managing your Mental Health during your PhD
- Advances in Diabetes Research and Management

主页

探索与了解开放科学



Discover
open access

SPRINGER NATURE Search EN

Open research About Journals & books Funding & support Open access agreements Data Open science policies

About

The fundamentals of open access and open research

What is open access and open research?

Open access (OA) refers to the free, immediate, online availability of research outputs such as journal articles or books, combined with the rights to use these outputs fully in the digital environment. OA content is open to all, with no access fees.

Open research goes beyond the boundaries of publications to consider all research outputs – from data to code and even open peer review. Making all outputs of research as open and accessible as possible means research can have a greater impact, and help to solve some of the world's greatest challenges.

What is CC BY?

The CC BY licence is the most open licence available and considered the industry 'gold standard' for OA; it is also preferred by many funders. It lets others distribute, remix, tweak, and build upon your work, even commercially, as long as they credit you for the original creation. It offers maximum dissemination and use of licenced materials. All Springer Nature journals with OA options offer the CC BY licence, and this is now the default licence for the majority of Springer Nature fully OA journals. It is also the default licence for OA books and chapters. Other Creative Commons licenses are available on request.

How do I pay for open access?

As costs are involved in every stage of the publication process, authors are asked to pay an open access fee. In order for their article to be published open access under a creative commons license, Springer Nature offers a free open access support service to make it easier for our authors to discover and apply for funding to cover article processing charges (APCs) and/or book processing charges (BPCs). Find out more.

What is open data?

We believe that all research data, including research files and code, should be as open as possible and want to make it easier for researchers to share the data that support their publications, making them accessible and reusable. Find out more about our research data services and policies.

What is a preprint?

A preprint is a version of a scientific manuscript posted on a public server prior to formal peer review. Once posted, the preprint becomes a permanent part of the scientific record, citable with its own unique DOI. Early sharing is recommended as it offers an opportunity to receive feedback on your work, claim priority for a discovery, and help research move faster. In Review is one of the most innovative preprint services available, offering real time updates on your manuscript's progress through peer review. Discover In Review and its benefits.

What is open peer review?


Open peer review refers to the process of making peer reviewer reports openly available. Many publishers and journals offer some form of open peer review, including BMC who were one of the first publishers to open up peer review in 1999. Find out more.

主页

发表您的科研成果



Publish with us



Publish your research

Springer Nature has a portfolio of over 3,000 journals. We also publish thousands of books each year. Our family of brands includes Nature, Springer and Palgrave Macmillan.

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- [Publish a book](#)
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- [Open access publishing](#)
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登录与账户管理

注册用户可直接登录

The screenshot shows the SpringerLink homepage. At the top left is the 'SPRINGER LINK' logo. To its right is a 'Log in' link, which is highlighted by a blue box and an arrow labeled '登录入口'. Below the logo is a navigation bar with links for 'Find a journal', 'Publish with us', and 'Track your research', followed by a search bar and a 'Cart' icon. The main content area features a large search bar with the text 'Search for research articles, academic books and more'. Below this are three statistics: '200 million monthly downloads', '24 million monthly readers', and '3 million authors submit annually'. A large orange-bordered box on the left contains the text 'Home for all research'. Below the statistics are three main action cards: 'Discover open access' (with an image of people), 'Publish with us' (with an image of a person at a computer), and 'Track your research' (with an image of hands on a laptop). At the bottom are three smaller cards: 'Featured articles and journals' (with a book icon), 'Browse by subject' (with a network icon), and 'About SpringerLink' (with an information icon).

登录入口

登录与账户管理

注册新帐户


尚未注册的用户可用邮件轻松注册（帐户也可用于SNAPP, nature.com等施普林格·自然旗下其他平台），或使用谷歌/ORCID账号登录。


Log in, or register a new account, to track your submissions and check your impact

Email address

Continue →

OR

 **Continue with Google** →

 **Continue with ORCID** →

Create account

Registering as [silvia.he@springernature.com](#)

Given names

Family name

Password (12 or more characters)

 [show](#)

Repeat password

 [show](#)

I agree to the [Springer Nature Terms of Use](#)

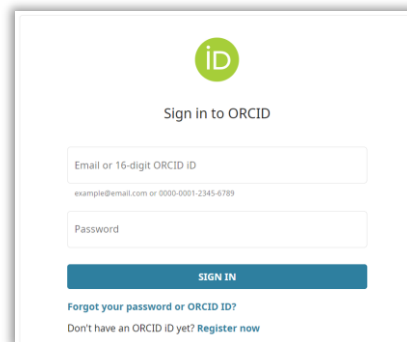
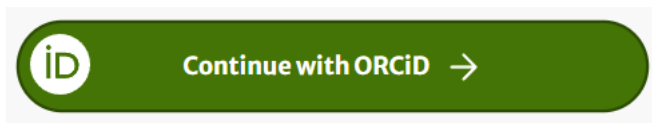
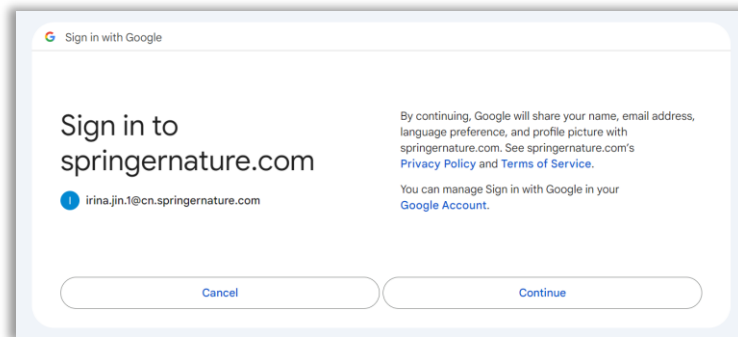
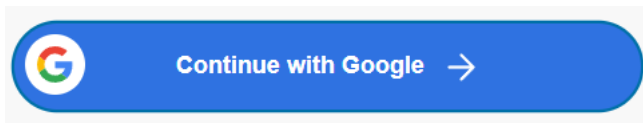
As a registered user you agree that Springer Nature can collect and use your personal data as detailed in our [Privacy Statement](#).

Register →

[< Try another method of logging in](#)

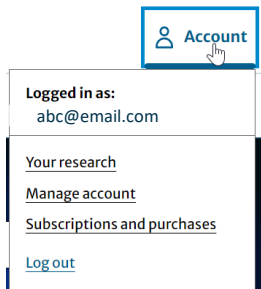
登录与账户管理

注册新帐户



登录与账户管理

管理帐户



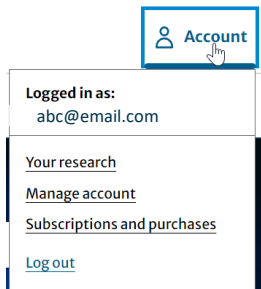
点击右上角的 [Account]-[Your Research]

- 追踪投稿信息
- 查看自己发表研究成果的表现
- 探索投稿征集信息

A screenshot of the Springer Nature user dashboard. The header shows 'SPRINGER NATURE' and 'Account' with a user icon. The main content area is titled 'Your research' and includes a sidebar with 'Your research', 'Peer review', and 'Account Settings'. The main area features two large action buttons: 'Track the progress of your submitted articles' (teal) and 'Check the performance of your publications' (purple). Below these is a section 'Explore where to submit to next' with a recommendation for a 'Neuroscience' collection. The collection details include 'Publishing model: Hybrid' and 'Submission deadline: Ongoing'. An 'Explore this collection' button is at the bottom.

登录与账户管理

管理帐户



完成注册后，点击右上角的
[Account]-[Manager account]

进入个人帐户，并随时管理个性化推送订阅和个人专业信息和兴趣领域

A screenshot of the SpringerLink account management page. At the top left, there is a link "< Return to SpringerLink". The page has a sidebar on the left with a list of menu items: "Account overview", "Alerts and notifications" (highlighted in blue), "Subscriptions and purchases", "Linked accounts", "Linked institutions", and "Your research". The main content area is titled "Alerts and notifications" and "Journal alerts and eTOCs". Below this, there is a text description: "Manage your journal alerts and email table of contents (eTOCs)." and a search input field containing "E-alerts for Nature.com (including journal alerts and newsletters)". Further down, there is another section titled "Your communications preferences" with the text "Manage how we communicate with you." and a search input field containing "Opt in / out of product information, special offers and third party promotions on Nature.com". Two blue callout boxes with arrows point to the "Alerts and notifications" and "Your communications preferences" sections. The first callout box contains the text "管理期刊和研究资讯的个性化推送订阅". The second callout box contains the text "管理个人专业信息和兴趣领域".

访问授权

登录后，想知道自己所在的机构是否已获得SpringerLink平台的授权访问？

The screenshot shows the SpringerLink homepage with a dark blue background. At the top, there are four main navigation sections: 'Discover content', 'Publish with us', 'Products and services', and 'Our imprints'. Each section contains several links. At the bottom of the page, there is a footer with various links and a copyright notice. A white box with an orange border highlights the IP address '195.128.10.5' and the text 'Springer Nature Affiliates (3000093925) - Nature America Incorporated (3002782314)'. A white box with an orange border contains the text 'You can find it out by checking the bottom of the homepage.'

Discover content
[Journals A-Z](#)
[Books A-Z](#)

Publish with us
[Publish your research](#)
[Open access publishing](#)

Products and services
[Our products](#)
[Librarians](#)
[Societies](#)
[Partners and advertisers](#)

Our imprints
[Springer](#)
[Nature Portfolio](#)
[BMC](#)
[Palgrave Macmillan](#)
[Apress](#)

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The screenshot shows the SpringerLink homepage with a dark blue background. At the top, there are four main navigation sections: 'Springer', 'Nature Portfolio', 'BMC', 'Palgrave Macmillan', and 'Apress'. At the bottom of the page, there is a footer with various links and a copyright notice. A white box with an orange border highlights the IP address '117.133.77.21' and the text 'Not affiliated'. The Springer Nature logo and copyright notice are visible at the bottom.

[Springer](#)
[Nature Portfolio](#)
[BMC](#)
[Palgrave Macmillan](#)
[Apress](#)

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117.133.77.21
Not affiliated

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未授权

SPRINGER NATURE

访问授权

根据用户所在的不同空间位置，SpringerLink平台的登录方法可以划分成以下两大类：

1) 在校或者到馆访问

学校和图书馆的IP范围已得到平台授权，用户通过台式电脑、笔记本电脑或者IPAD、手机等各种移动终端连接到学校或者图书馆的网络，即可自动获得平台访问权限。

2) 远程访问

远程登录方法一：VPN代理登录

用户在台式电脑、笔记本电脑或者IPAD、手机等各种移动终端上，通过VPN连接到学校或者图书馆的内部网络环境，即可自动获得平台访问权限。

远程登录方法二：CARSI

(教育网) 远程认证登录 (教工号、学号认证登录)

点击CARSI远程登录链接，页面将自动跳转至大学统一身份认证系统页面，输入本人账号和密码登录，即可使用平台资源。

访问授权

远程登录方法二：CARS1（教育网）远程认证登录（教工号、学号认证登录）

Home > Book

Apress®

Generative AI

How ChatGPT and Other AI Tools Will Revolutionize Business

Book | © 2023

Overview

Authors: Tom Taulli

- Learn about Generative AI, one of the transformative technologies that will change businesses and startups
- Build a working knowledge of the technology and understand the potential and risks
- Understand what startups are doing in the space

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北京航空航天大学 中文 | EN

统一身份认证
教育网联邦认证和资源共享服务(CARS1)

密码登录 扫码登录

输入教工号

输入学号

登录

忘记密码 立即激活 个人中心

北京航空航天大学 © 2021 京ICP备05004617-3
技术支持: 信息化办公室 电话: 010-82317005
网络服务热线: 台帐: 34046888 65.0+网络: 京.82.0+1

检索与浏览

The screenshot shows the Springer Link website. At the top left is the 'SPRINGER LINK' logo. To its right is a navigation bar with links: 'Find a journal', 'Publish with us', 'Track your research', 'Search', and 'Cart'. The 'Search' link is highlighted with an orange box and an annotation '导航条在所有页面可见' (Navigation bar is visible on all pages). Below the navigation bar is a search area with a text input field and a search icon. Below this is a dark blue banner with the text 'Search for research articles, academic books and more' and a search icon. Below the banner are three statistics: '200 million monthly downloads', '24 million monthly readers', and '3 million authors submit annually'. On the right side, there are two callouts: '响应式检索' (Responsive search) pointing to the search input field, and '大多数用户可通过搜索功能获取内容' (Most users can get content through the search function) pointing to the search icon in the banner. At the bottom, there is a dark blue footer with four columns of links: 'Discover content' (with sub-links 'Journals A-Z' and 'Books A-Z'), 'Publish with us' (with sub-links 'Publish your research' and 'Open access publishing'), 'Products and services' (with sub-links 'Our products', 'Librarians', 'Societies', and 'Partners and advertisers'), and 'Our imprints' (with sub-links 'Springer', 'Nature Portfolio', 'BMC', 'Palgrave Macmillan', and 'Apress').

导航条在所有页面可见

响应式检索

大多数用户可通过搜索功能获取内容

也可按首字母搜索所有 Springer Nature 旗下期刊或图书

Discover content
[Journals A-Z](#)
[Books A-Z](#)

Publish with us
[Publish your research](#)
[Open access publishing](#)

Products and services
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Our imprints
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[BMC](#)
[Palgrave Macmillan](#)
[Apress](#)

检索与浏览

按首字母检索

Journals A-Z

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z #

Search Journals

A ◀ Previous 1 2 Next ▶

356 publications

AAPPS Bulletin	Acta Physiologiae Plantarum	Allergy, Asthma & Clinical Immunology
AAPS Open	Acta Politica	Alpine Botany
AAPS PharmSciTech	Acta Scientiarum Mathematicarum	Alzheimer's Research & Therapy

Books A-Z

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z #

Search Books

A ◀ Previous 1 2 3 4 5 ...134 Next ▶

26732 publications

A 25-Year Perspective on Logic Programming	A Book on C	A Calculus for Factorial Arrangements
A 3D Visualization Teaching-Learning Trajectory for Elementary Grades Children	A Boole Anthology	A Calculus of Communicating Systems
	A Boolean Algebra	A Calculus of Distributed and Parallel Processes

检索与浏览

检索结果页面

搜索结果列表默认显示SpringerLink平台上所有相关内容：包含来自 Springer, BMC, Nature Portfolio, Palgrave Macmillan等平台的内容。

使用过滤选项以帮助
您优化搜索结果

过滤选项包括：

- 内容类型
- 出版日期
- 语言
- 学科
- 子学科

The screenshot shows a search results page for 'Electrochemical Energy'. At the top, there is a survey link: 'We're trying something new. Let us know what you think of the new search experience with a quick survey, or go back to the old experience.' Below this is a search bar with the text 'Electrochemical Energy' and a 'Search' button. The results are sorted by 'Relevance'. The first result is 'Electrochemical Energy Reviews', a journal from 2018 to 2024. The second result is 'Nanostructured Materials for Electrochemical Energy Production and Storage', a book from 2009. The third result is 'Synthesis of Functional Nanomaterials for Electrochemical Energy Storage', a book from 2020. The fourth result is 'Electrochemical Energy Storage and Conversion', a reference work entry from 2016. Annotations in orange boxes point to various elements: '内容名称' (Content Name) points to the title of the first result; '出版年份' (Publication Year) points to the date range of the first result; '内容类型' (Content Type) points to the 'Reference Work Entry' label of the fourth result; '文章/图书章节所在期刊/图书' (Journal/Book Chapter Location) points to the 'in Encyclopedia of Nanotechnology' label of the fourth result. A dropdown menu for sorting is open, showing options: 'Relevance', 'Date published (new to old)', and 'Date published (old to new)'. A 'Sort by (updates page)' label is also present above the dropdown.

点击此处链接可跳回
旧版搜索界面
*此为临时链接

对搜索结果排序：

- 相关性
- 由新到旧
- 由旧到新

期刊主页 - 概览

Home > Breast Cancer Springer

Breast Cancer (1)
Publishing model: Hybrid (2)
[Submit your manuscript](#) (3)

Editorial board (4) | Aims and scope (5) | Journal updates (6)

(7) Overview (16) **For authors**

The official journal of the Japanese Breast Cancer Society, *Breast Cancer* publishes articles that contribute to progress in the field, in basic or translational research and also in clinical research. It develops a new focus and new perspectives for all who are concerned with breast cancer.

Breast Cancer presents original articles describing clinical, epidemiological studies and laboratory investigations regarding breast cancer and related diseases. It features editorials, review articles, original articles, case reports, and short papers. The journal provides the best of up-to-date information on breast cancer, presenting readers with high-impact, original work focusing on pivotal issues.

This is a **transformative journal**, you may have access to funding.

(8) Editor-in-Chief
Takayuki Ueno

(9) Impact factor 4.0 (2022) | **5 year impact factor** 3.8 (2022)
Submission to first decision (median) 13 days | **Downloads** 500,362 (2022)

(10) Societies and partnerships
Japanese Breast Cancer Society

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Kawasaki disease (KD), an enigmatic medium vessel vasculitis, presents as an acute febrile illness predominantly affecting young children. KD appears to be a hyper-inflammatory response elicited by environmental or infectious agents (including respiratory viruses) in genetically predisposed individuals. Numerous reports from the current era of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) pandemic have described the occurrence of KD/KD-like illness in close temporal proximity to SARS-CoV-2 infection or exposure. Notably, KD has been reported in association with H₁N₁-pdm09 virus that caused the previous pandemic a decade ago. Non-H₁N₁ influenza infections as well as influenza vaccination have also been reported to trigger KD. Herein, we report a case of H₁N₁-pdm09 influenza who developed KD. We review the published literature on influenza infection or vaccination triggering KD. This may help in a better understanding of the KD/KD-like illness associated with SARS-CoV-2. Besides, we also evaluate the safety of aspirin in influenza-triggered KD as aspirin administration in children with influenza is associated with the risk of development of Reye syndrome.

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(13) **Introduction**

Kawasaki disease (KD) is an acute febrile vasculitic disorder of childhood predominantly affecting medium size arteries with a predilection for coronary arteries. KD is now the leading cause of acquired heart disease in children worldwide [1]. The illness was first reported by Dr. Tomisaku Kawasaki, a Japanese pediatrician, in 1967 when he reported a series of 50 patients [2]. Classic or 'complete' KD clinically presents with fever for at least 5 days with four of the following clinical manifestations: edema of hands and feet in the acute stage and/or subacute periungual skin peeling of fingers and toes, polymorphous

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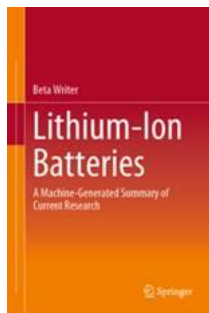
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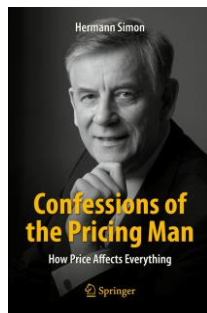
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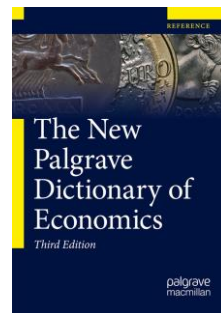
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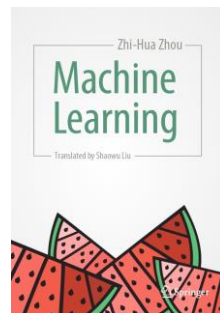
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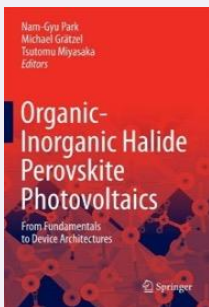
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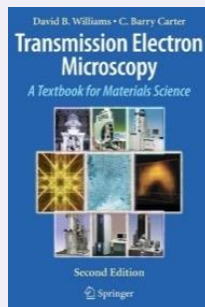
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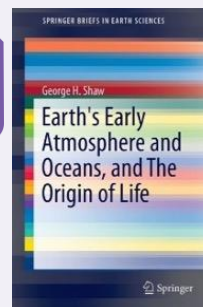
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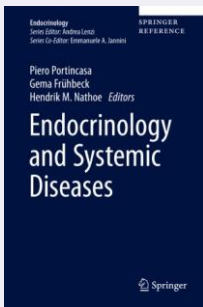
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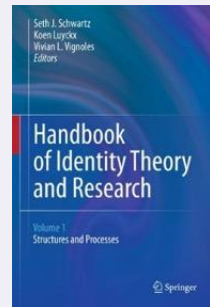
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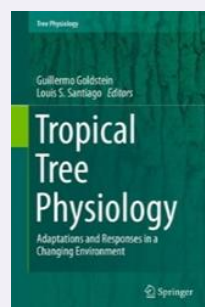
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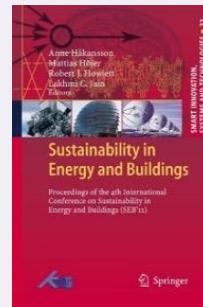
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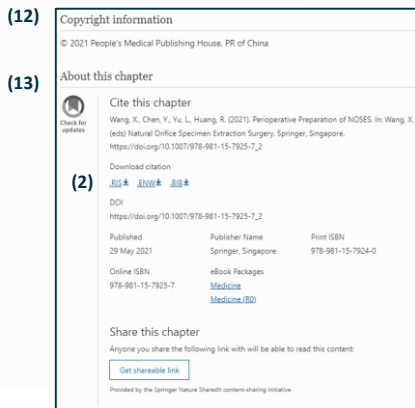
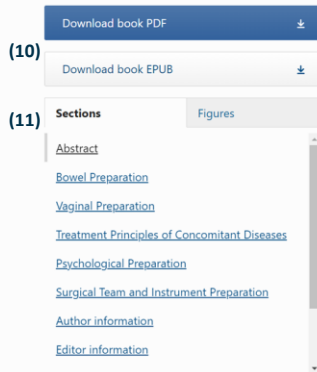
Preoperative preparation, especially bowel preparation, is a routine procedure before colorectal examinations and surgeries. Bowel preparation aims to clean the bowel and facilitate surgeries. With the popularization of Enhanced Recovery After Surgery (ERAS), the contents of preoperative preparation are constantly adjusted and improved. However, due to the particularity in the surgical procedures of NOSES, preoperative preparation is still vitally important. It involves many aspects including bowel preparation, vaginal preparation for females, and psychological preparation for patients. The most satisfactory surgical effects cannot be achieved without a comprehensive preoperative preparation.

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Preoperative preparation, especially bowel preparation, is a routine procedure before colorectal examinations and surgeries. Bowel preparation aims to clean the bowel and facilitate surgeries. With the popularization of Enhanced Recovery After Surgery (ERAS), the contents of preoperative preparation are constantly adjusted and improved. However, due to the particularity in the surgical procedures of NOSES, preoperative preparation is still vitally important. It involves many aspects including bowel preparation, vaginal preparation for females, and psychological preparation for patients. The most satisfactory surgical effects cannot be achieved without a comprehensive preoperative preparation.

1 Bowel Preparation (9)

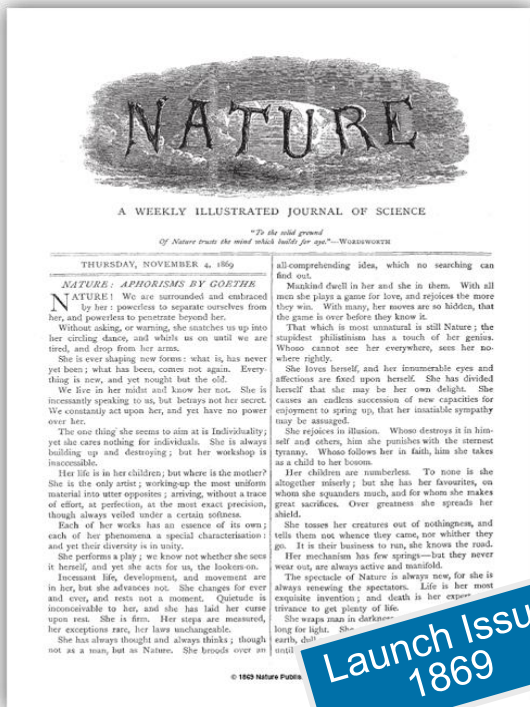
There are significant differences between NOSES and conventional laparoscopic surgery in terms of specimen extraction and digestive reconstruction. Aseptic techniques are involved in



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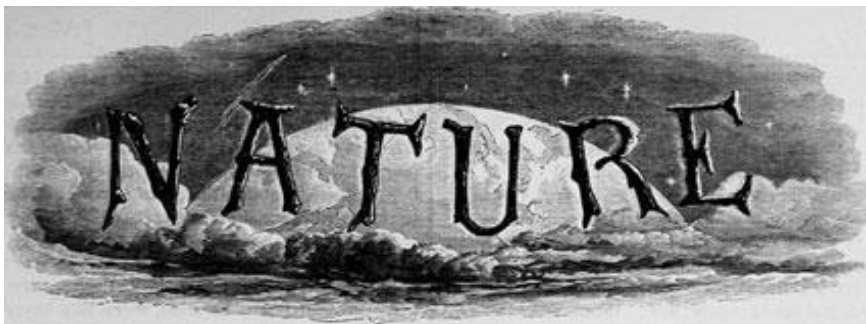
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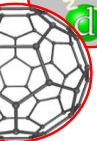
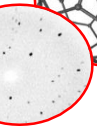
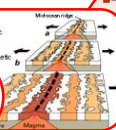
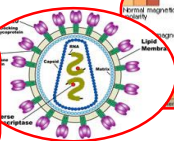
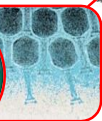
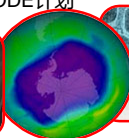
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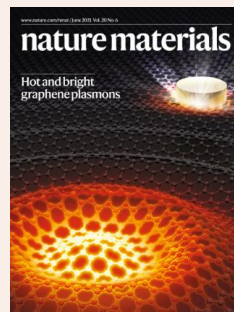
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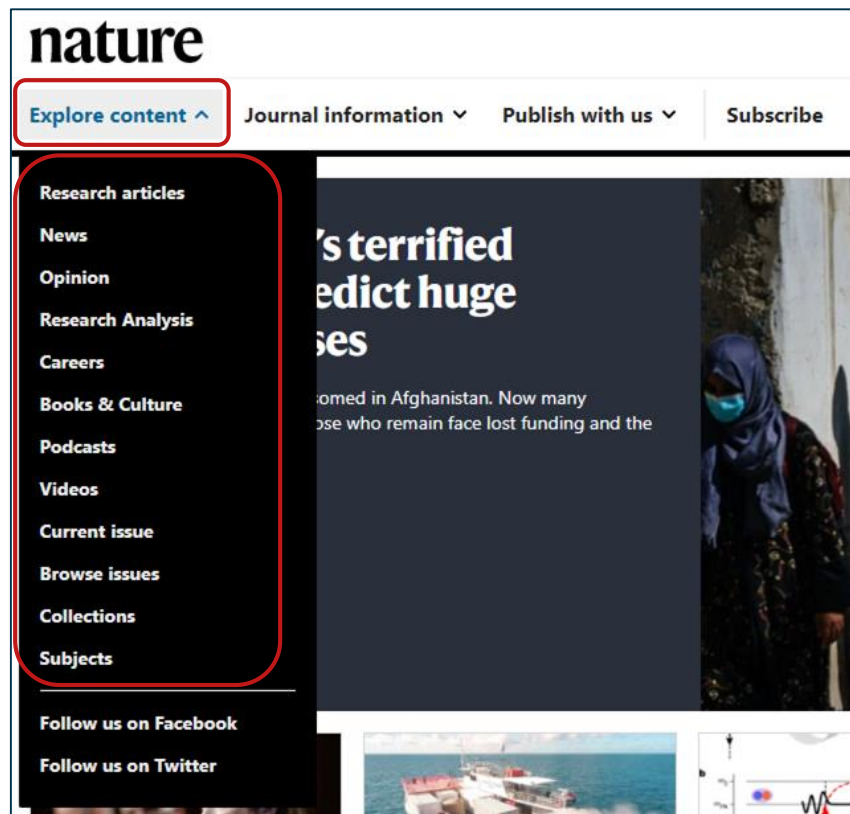
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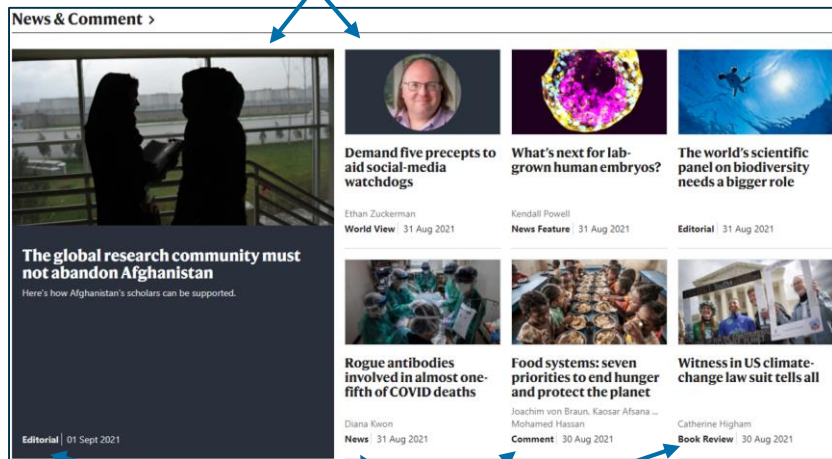
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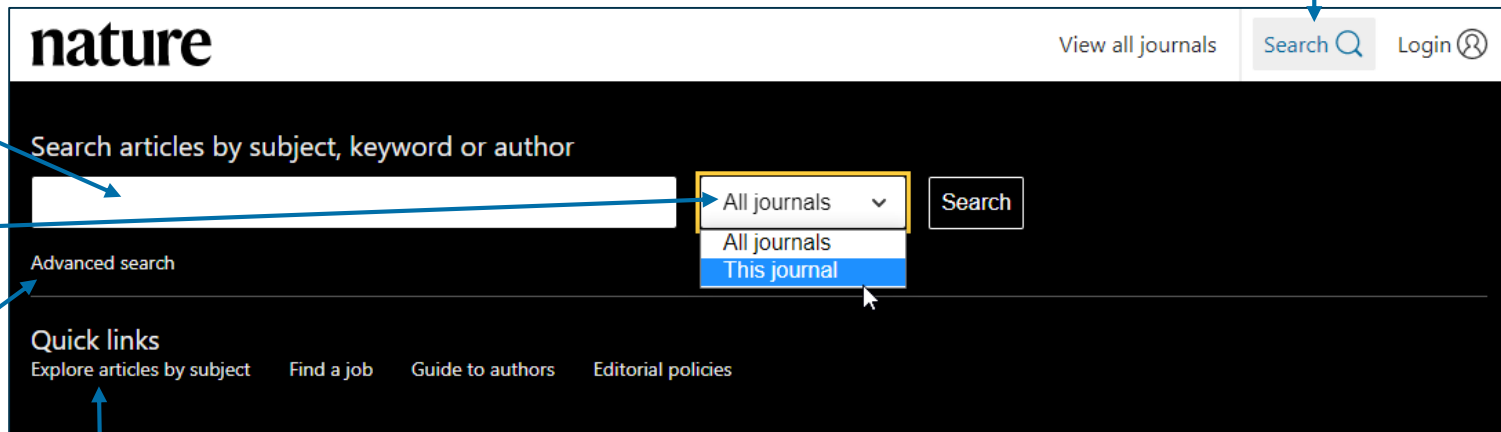
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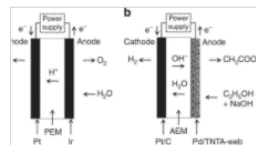
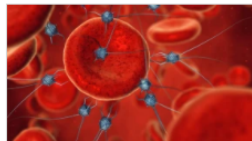
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5) *Nature Climate Change* 11, 736–745 (2021) | Cite this article 6)

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Traditionally, analysis of the costs of cutting greenhouse gas emissions has assumed that governments would implement idealized, optimal policies such as uniform economy-wide carbon taxes. Yet actual policies in the real world, especially in large federal governments, are often highly heterogeneous and vary in political support and administrative capabilities within a country. While the benefits of heterogeneous action have been discussed widely for experimentation and leadership, little is known about its costs. Focusing on the United States, we represent plausible variation (by more than a factor of 3) in the stringency of state-led climate policy in a process-based integrated assessment model (GCAM-USA). For a wide array of national decarbonization targets, we find that the nationwide cost from heterogeneous subnational policies is only one-tenth higher than nationally uniform policies. Such results hinge on two critical technologies (advanced biofuels and electricity) for which inter-state trade ameliorates the economic efficiencies that might arise with heterogeneous action.

Main 11)

As governments get serious about decarbonization, political leaders in large and politically diverse countries need to grapple with huge variations in political and administrative feasibility within their countries. That heterogeneity in interests and capabilities has led many federal governments to encourage or tolerate large internal variations in policy effort. Diverse studies have pointed to the benefits of heterogeneous approaches for experimentation and learning^{1,2,3,4}. Yet these realities in climate politics have not been well

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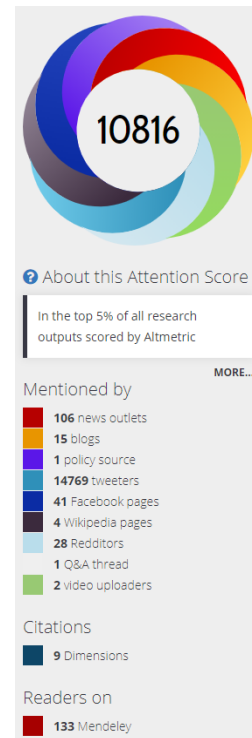
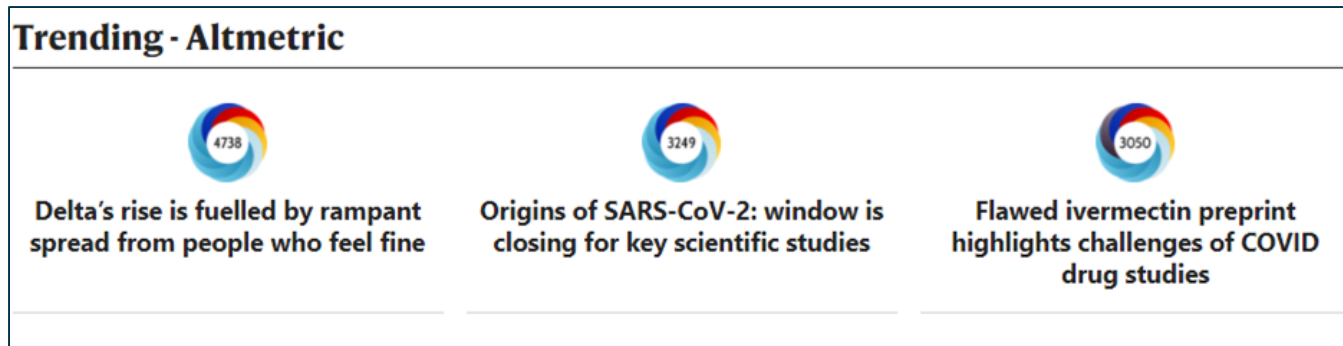
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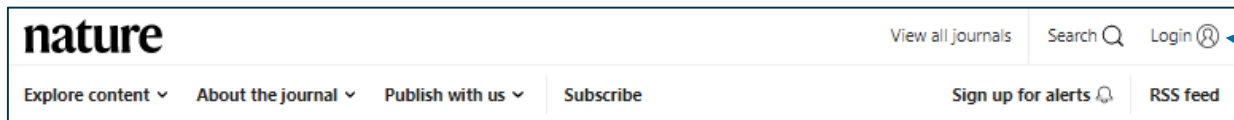
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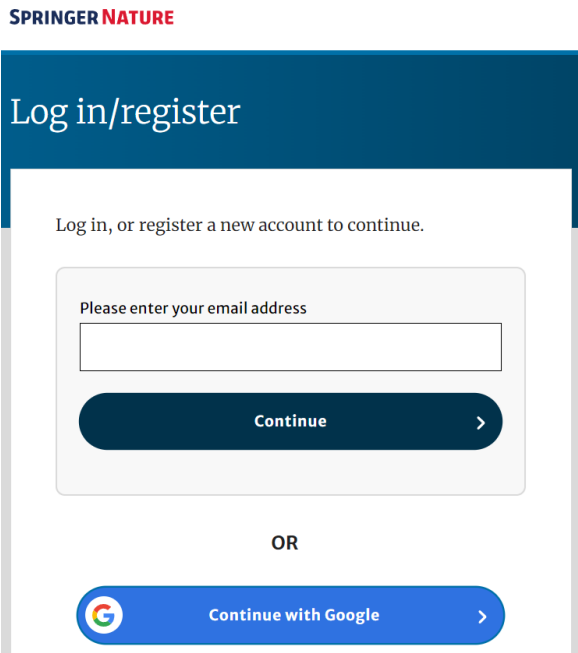
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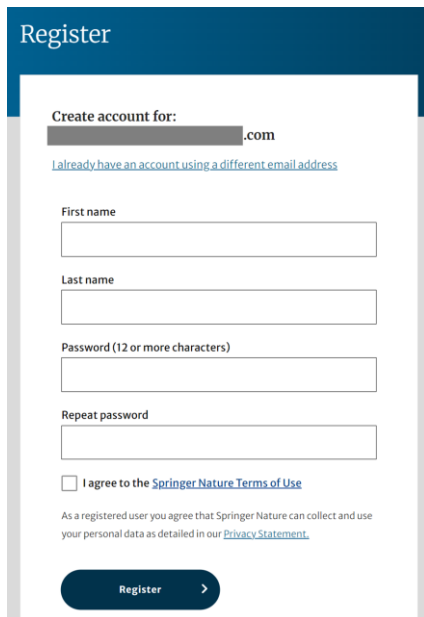
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Home > Mucins > Protocol

Fabrication and Characterization of Mucin Nanoparticles for Drug Delivery Applications

Protocol | First Online: 14 February 2024
pp 383–394 | [Cite this protocol](#)

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Abstract

Mucin glycoproteins are ideal biomacromolecules for drug delivery applications since they naturally offer a plethora of different functional groups that can engage in specific and unspecific binding interactions with cargo molecules. However, to fabricate drug carrier objects from mucins, suitable stabilization mechanisms have to be implemented into the nanoparticle preparation procedure that allow for drug release profiles that match the requirements of the selected cargo molecule and its particular mode of action. Here, we describe two different methods to prepare crosslinked mucin nanoparticles that can release their cargo either on-demand or in a sustained manner. This method chapter includes a description of the preparation and characterization of mucin nanoparticles (stabilized either with synthetic DNA strands or with covalent crosslinks generated by free radical polymerization), as well as protocols to quantify the release of a model drug from those nanoparticles.



Mucins

Sections	Figures	References
-----------------	----------------	-------------------

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The screenshot shows the Springer Nature Experiments website. At the top, there is a search bar with the placeholder text "e.g. technique, organism, antibody...". Below the search bar, there are navigation links for "Springer Protocols", "Nature Protocols", "Nature Methods", and "Nature Reviews Methods Primers". The main content area features a large blue and white graphic of a DNA double helix. The text reads "Life Sciences Protocols and Methods Discovery Platform" and "Maximize your research progress with the leading portfolio of top quality and trustworthy protocols, methods, reviews, and more." At the bottom, there is a table with five columns: "Protocols & Methods" (67041), "Overview" (11924), "Research" (2431), "Primers" (148), and "News" (2503).

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Concepts identified: Technique: PCR x, Organism: Alphacoronavirus x

Filters:

- Publication Year:** A range slider is set between 2007 and 2020.
- Technique:** A list of techniques with checkboxes and counts:
 - Reverse Transcription PCR: 13
 - Transfection: 9
 - Agarose Gel Electrophoresis: 8
 - Cell And Tissue Culture: 7
 - Freeze-thaw Method: 7
 - Plaque Purification: 6
 - Sequence Analysis: 6
 - Electrophoresis: 5
 - Electroporation: 5
 - DNA Extraction: 4
- Antibody BETA:** A dropdown menu is currently set to "Antibody BETA".
- Source:** A list of sources with checkboxes and counts:
 - Springer: 19
 - Methods In Molecular Biology: 14
 - Springer Protocols Handbooks: 5

Sorting options: Relevance (selected), Most recent, Most cited, Trending.

Search Results:

- Result 1:** "An RT-PCR Assay for Detection of Infectious Bronchitis Coronavirus Serotypes" by Junfeng Sun, Shengwang Liu. Series: Springer Protocols Handbooks > Book: Animal Coronaviruses. Techniques: Sequence Analysis, Freeze-thaw Method, Viral RNA Extraction, PCR, Reverse Transcription. Models: Alphacoronavirus, Gallus gallus. Downloads: 818.
- Result 2:** "A Multiplex Polymerase Chain Reaction for Differential Detection of Turkey Coronavirus from Chicken Infectious Bronchitis Virus and Bovine Coronavirus" by Chien Chang Loa, Ching Ching Wu, Tsang Long Lin. Series: Springer Protocols Handbooks > Book: Animal Coronaviruses. Techniques: Multiplex PCR, Electrophoresis, PCR, Spectroscopy. Models: Infectious bronchitis virus, Alphacoronavirus, Turkey coronavirus, Bovine coronavirus, Gallus gallus. Downloads: 836.

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Biochemical Characterization of Middle East Respiratory Syndrome Coronavirus Spike Protein Proteolytic Processing

Springer Protocols

Authors:
Gary R. Whittaker², Juan K. Millet^{1,2}
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Abstract

The coronavirus spike envelope glycoprotein is an essential viral component that mediates virus entry events. Biochemical assessment of the spike protein is critical for understanding structure–function relationships and the roles of the protein in the viral life cycle. Coronavirus spike proteins are typically proteolytically processed and activated by host cell enzymes such as trypsin-like proteases, cathepsins, or proprotein-converterases. Analysis of coronavirus spike proteins by western blot allows the visualization and assessment of proteolytic processing by endogenous or exogenous proteases. Here, we present a method based on western blot analysis to investigate spike protein proteolytic cleavage by transient transfection of HEK-293 T cells allowing expression of the spike protein of the highly pathogenic Middle East respiratory syndrome coronavirus in the presence or absence of a cellular trypsin-like transmembrane serine protease, matrilysin. Such analysis enables the characterization of cleavage patterns produced by a host protease on a coronavirus spike glycoprotein. [less](#)

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Susan D. Chapple & Michael R. Dyson, 2014, Springer Protocols

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Figures (3) & Videos (0)

Fig 1

Keywords

Techniques:
Transfection, Western Blot, Radioimmunoprecipitation Assay, Cell And Tissue Culture, PKGE, Cell Lysis, Transient Transfection, Electrophoresis

Models:
Bos taurus, Alphacoronavirus, Oryctolagus cuniculus, Middle East respiratory syndrome-related coronavirus, Mus (mouse)

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The screenshot shows a web interface for exploring experimental topics. On the left, a 'Topics' sidebar lists three categories: 'Molecular techniques' (with sub-links like Single-molecule Assay, In Situ Hybridization, Recombinant Protein Expression, Western Blot, ChIP-seq, CRISPR, Cross-linking, High-Throughput Sequencing), 'Microscopy techniques' (with sub-links like Calcium Imaging, Super-resolution Microscopy, Cryo-EM, Two-photon Microscopy), and 'Cell and tissue culture techniques'. The main content area features the article 'Two-photon Microscopy Protocols And Methods'. Below the title are links for 'Recently cited', 'Recently published', 'Review papers', and 'Related techniques'. A paragraph of text describes the technique, with a blue dot and arrow pointing to the word 'protocols'. Below this is a 'Recently cited' section featuring a review article from 'Nature Methods (2005)' titled 'Deep tissue two-photon microscopy' by Fritjof Helmchen and Winfried Denk. The article snippet discusses light scattering in biological tissues and includes an 'Expand' button and a small thumbnail image. On the right, a 'Broader concepts' section shows a hierarchical tree starting with 'Multiphoton Microscopy' and branching into 'Two-photon Microscopy', which further branches into 'Two-photon Imaging', 'Two-photon Laser Scanning Microscopy', 'Two-photon In Vivo Imaging', and 'Two-Photon Calcium Imaging'. Below this is a 'More Microscopy techniques' section with links to 'Calcium Imaging', 'Super-resolution Microscopy', and 'Cryo-EM'.

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Type: Secondary





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Immunolabeling	Capra hircus	Dilute 1:1,000	Invitrogen, cat. no. A11034	Alexa Fluor 488	PBS without calcium and magnesium PBS with 1% (vol/vol) FBS		Derivation and characterization of mouse embryonic stem cells from permissive and nonpermissive strains
Fluorescence Cross-correlation Spectroscopy	Capra hircus	25 µg/ml	Molecular Probes/Invitrogen	Alexa488 Alexa633	Antibody dilution buffer AD buffer; PBS, 0.1% bovine serum albumin		One-step analysis of protein complexes in microliters of cell lysate using indirect immunolabeling & fluorescence cross-correlation spectroscopy
Indirect immunolabeling	Capra hircus	25 µg/ml	Molecular Probes/Invitrogen	Alexa488 Alexa633	Antibody dilution buffer AD buffer; PBS, 0.1% bovine serum albumin		One-step analysis of protein complexes in microliters of cell lysate using indirect immunolabeling & fluorescence cross-correlation spectroscopy
Western Blot	Capra hircus		Jackson ImmunoResearch, cat. no. 111-036-045	Peroxidase			Antibody-coupled siRNA as an efficient method for in vivo mRNA knockdown
Western Blot	Bos taurus	80 ng/ml	Santa Cruz Biotechnology, cat. no. sc-2374	horseradish peroxidase HRP	blocking buffer		The cellular thermal shift assay for evaluating drug target interactions in cells

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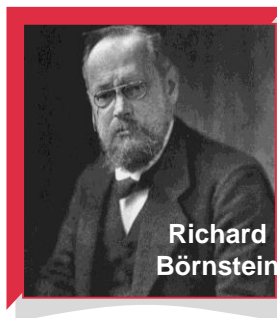
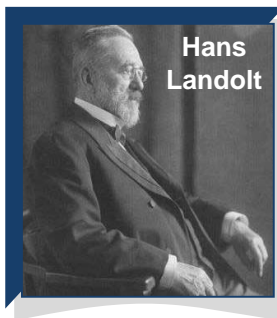
The screenshot shows the Springer Materials search interface. The search bar contains the text "heat capacity of polyethylene". Below the search bar, there are navigation links: Home, Search by Elements, Search by Structure, Corrosion Search, and Contact us. The search results section shows "1 result(s) using Focused Search for substance: polyethylene; property: heat capacity of". The result is titled "Polyethylene (PE) Heat Capacity, Enthalpy, Entropy, Gibbs Energy" and includes a temperature range of "Temperature Range (0.100 ... 1000.000) K". The interface also features a "Refine your search" section with filters for Data source (Polymer Thermodynamics), Discipline (electromagnetism, mechanics, thermodynamics), and Properties (enthalpy, entropy, Gibbs energy, glass transition, heat capacity).

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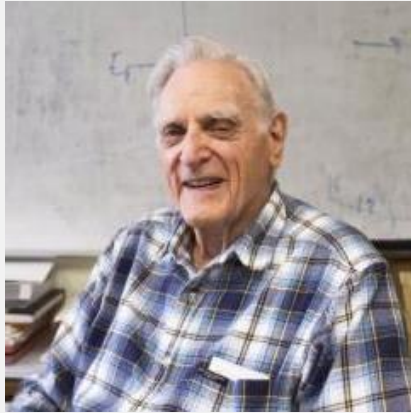
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III	Condensed Matter	晶体学, 结构与形态, 半导体, 电子、电学、光学性质, 原子缺陷与扩散, 光谱分析方法等等共计200余卷内容
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V	Geophysics	岩石的物理性质, 地球物理学、月亮和行星, 海洋学, 大气热力学和动力学, 空气的物理化学性质, 气候变化
VI	Astronomy and Astrophysics	天文学与天体物理学, 太阳系研究的方法、仪器和常数, 恒星和星团, 星际物质、星系和宇宙,
VII	Biophysics	生化及物理性质, 光谱与动力学, 晶体与结构
VIII	Advanced Materials and Technology	化石与新能源, 储能储氢材料, 液晶, 金属与磁性材料, 有特殊性能的材料 (如耐高温, 耐火), 激光, 辐射防护材料等

SPRINGER MATERIALS & LANDOLT-BÖRNSTEIN: 威名显赫的作者



**John B. Goodenough ,
2019 Nobel Prize**



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Condensed Matter
Volume 4
Magnetic and Other
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2020 Nobel Prize**

Group VI Astronomy and Astrophysics Volume 3 'Astronomy and Astrophysics' Subvolume C 'Interstellar Matter, Galaxy, Universe'

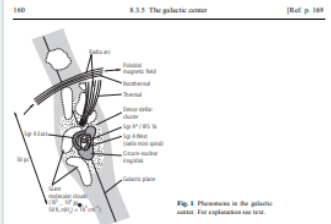


Fig. 1 Phenomena in the galactic center (Ref. p. 109)

A system of dense, warm, and massive giant molecular clouds (GMCs) is also concentrated toward the galactic plane. Most of these clouds are accompanying III regions and initial sources are located at positive latitudes. These velocities require a combination of orbital motion in the sense of galactic rotation, with substantial non-circular motions (NCM).

The peak of the radio continuum emission (the Sgr A complex) coincides with the stellar maximum. At high spatial resolution the Sgr A radio source is resolved into a very compact source (Sgr A*), size ≈ 1 millisecond, a system of five free emitting filaments of $\approx 10^4 K$ photoionized gas surrounding in the Sgr A West III region with the "wisps" (W), a shell-shaped synchronous (non-thermal) outflow of size a few arcseconds east of Sgr A* (Sgr A East) and a $2.7''$ diameter diffuse halo with a mixture of non-thermal and free-free emission. At high resolution one finds a number of ionizing thin, straight filaments in the halo ("beams"). The detailed description of the morphology of the radio emission the reader is referred to the various contributions in the proceeding of the 1989 IAU symposium on the galactic center (1989). Sgr A* within $1''$ of the dynamical center of the Galaxy and a group of organic-like blue near-infrared sources, called the "IR16 complex" which probably represent a compact cluster of luminous blue supergiants (LBS). Because of its small size and lack of proper motion in excess of about 0.3 km s^{-1} , Sgr A* is the most likely candidate for an active central source in a galaxy (Mack Riechert). The Sgr A West III region with its non-thermal is a system of orbiting (more likely suborbital) structures that are ionized by the central radiation field (1985). Sgr A East may be the remnant halo of a (a) recently exploded supergiant (1982).

North of the Sgr A complex one finds a spectacular out of energetic, non-thermal filaments, oriented perpendicular to the galactic plane. They and a second set of patchy, thermally (free-free) emitting filaments form the so-called "Radio Arcs" (1984). The straight filaments are very likely due to reconnection emission in a large scale, poloidal magnetic field system (1981 etc.). Not indicated in Fig. 1 is an even more extended 10-degree radio structure (1981 etc.).

North of the Sgr A complex one finds a spectacular out of energetic, non-thermal filaments, oriented perpendicular to the galactic plane. They and a second set of patchy, thermally (free-free) emitting filaments form the so-called "Radio Arcs" (1984). The straight filaments are very likely due to reconnection emission in a large scale, poloidal magnetic field system (1981 etc.). Not indicated in Fig. 1 is an even more extended 10-degree radio structure (1981 etc.).

Sgr A West and the radio non-thermal is surrounded by an oval-shaped distribution of dense, warm molecular gas that is orbiting the center. This circumstellar ring or disk has an inner radius of

Landolt-Börnstein
Fundamental Physical Constants
978-3-540-36202-9

SPRINGER MATERIALS & LANDOLT-BÖRNSTEIN: 威名显赫的用户

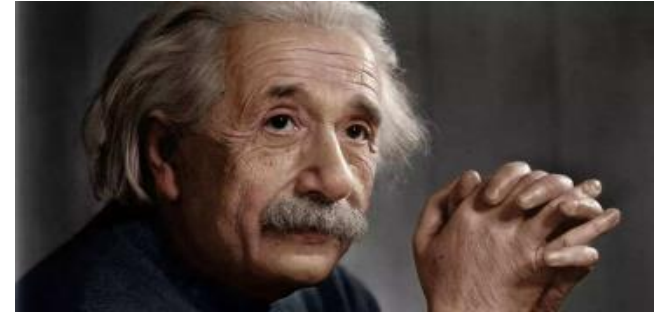
ANNALEN DER PHYSIK.

9. Die Plancksche Theorie der Strahlung und die Theorie der spezifischen Wärme; von A. Einstein.

In zwei früheren Arbeiten¹⁾ habe ich gezeigt, daß die Interpretation des Energieverteilungsgesetzes der schwarzen Strahlung im Sinne der Boltzmannschen Theorie des zweiten Hauptsatzes uns zu einer neuen Auffassung der Phänomene der Lichtemission und Lichtabsorption führt, die zwar noch keineswegs den Charakter einer vollständigen Theorie besitzt, die aber insofern bemerkenswert ist, als sie das Verständnis einer Reihe von Gesetzmäßigkeiten erleichtert. In der vorliegenden Arbeit soll nun dargetan werden, daß die Theorie der Strahlung — und zwar speziell die Plancksche Theorie — zu einer Modifikation der molekular-kinetischen Theorie der Wärme führt, durch welche einige Schwierigkeiten beseitigt werden, die bisher der Durchführung jener Theorie im Wege standen. Auch wird sich ein gewisser Zusammenhang zwischen dem thermischen und optischen Verhalten fester Körper ergeben.

Bern, November 1906.

(Eingegangen 9. November 1906.)

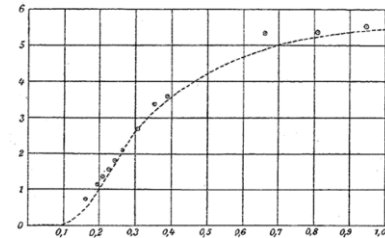


Wir entnehmen ferner den Tabellen von Landolt und Börnstein einige Angaben über ultrarote Eigenschwingungen

(metallische Reflexion, Reststrahlen) einiger durchsichtiger Körper; die beobachteten λ sind in nachstehender Tabelle unter „ $\lambda_{\text{beob.}}$ “ angegeben; die Zahlen unter „ $\lambda_{\text{ber.}}$ “ sind aus der Tabelle entnommen, soweit sie sich auf Atome kleiner spezifischer Wärme beziehen; für die $\lambda > 48 \mu$ sein.

Körper	$\lambda_{\text{beob.}}$	$\lambda_{\text{ber.}}$
CaFl	24; 31,6	33; >
NaCl	51,2	>
KCl	61,2	>
CaCO ₃	6,7; 11,4; 29,4	12; 21;
SiO ₂	8,5; 9,0; 20,7	20;

190 A. Einstein. Plancksche Theorie der Strahlung etc.



betreffenden festen Stoffe vorkommen, für die spezifische Wärme pro Grammäquivalent den Ausdruck¹⁾

$$(8a) \quad c = 5,94 \sum \frac{\frac{\partial v}{\partial T} \left(\frac{\partial v}{T} \right)^2}{\left(e^{\frac{\partial v}{T}} - 1 \right)^2}$$

SPRINGER MATERIALS: 数字化的数据库

子数据库&数据合集	内容	针对学科及研究领域
材料科学经典系列丛书	508卷Landolt-Börnstein丛书, 26卷SpringerMaterials基础知识手册, 4卷Springer手册	详见前页
无机固相数据库	320,000+ 晶体结构 40,000+ 相图 160,000+组物理化学性质	电子信息材料、能源材料、特种材料, 如半导体材料、电子材料、锂电池、催化剂、玻璃、光学材料、探测及遥感用材料器件等
MSI Eureka 数据库	4,314 份关于二元和三元金属和半导体体系的相图报告 7646个交互式相图 71000书目报告	金属及合金材料的冶炼、制造和应用, 高温高压环境下的特种材料(如钴探、航天), 燃料、能源等
腐蚀性质数据库	1000+金属体系在275+环境中的25,000组腐蚀性质数据	海洋材料、航空材料、材料防腐科学(如石化、新能源设备的长期维护)
吸附性质数据库	4,331 组吸附等温曲线, 涉及99种被吸附物和1,355种吸附剂	化学处理、提纯、燃料、能源、传感、生物材料、污染控制、气候变化
有机物质热物性数据库	51种有机物质和1,200+二元混合物的472,000组热物性数据	提纯、精细化工及药物生产与提纯, 有机材料的应用研究
高分子热力学数据库	12,000+纯高分子, 8000+混合物的28种热力学性质数据, 包含数据超过1,000,000个	塑料、包装、化工、涂料、薄膜、医学材料、生物材料
泡沫金属性质数据	300组泡沫金属的性质数据	特种金属材料, 航空航天材料, 导弹工业, 建筑、特种设备、人工骨骼
材料的光谱表征与显微成像数据合集	金属、有机物质、液体、高聚物等的紫外、红外、拉曼、PES, Mössbauer, 核磁, 及透射电镜, 扫描隧道显微镜等材料表征方法下的特征数据信息	材料和物质表征是广泛研究领域的常用数据信息
(有机&无机) 物质档案	35,684个有机和无机物的物质档案	广泛研究领域的常用数据信息

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性能类型 (举例)



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结构性质



机械性能



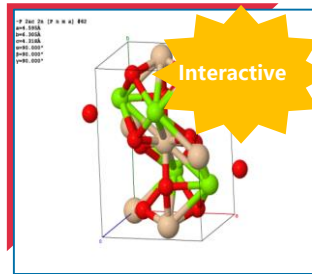
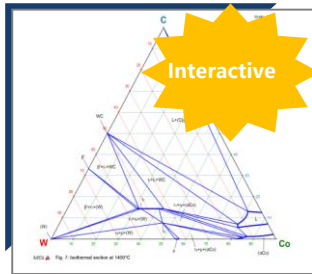
光谱学性质



原子能性质

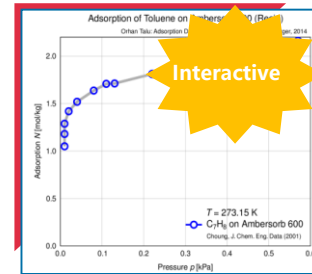
SPRINGERMATERIALS : 数据类型

相图, 晶体结构, 数据表格, 材料性质文档, 曲线图



Calculated and Experimental data

Temperature (°C)	Adsorption State			Capillary State		
	Heat Capacity (J/mol-K)	Entropy (J/mol-K)	OSL (J/mol-K)	Heat Capacity (J/mol-K)	Entropy (J/mol-K)	OSL (J/mol-K)
0.00	0.000	0.000	0.000	0.000	0.000	0.000
0.00	0.000	0.000	0.000	0.000	0.000	0.000
0.00	0.000	0.000	0.000	0.000	0.000	0.000
0.00	0.000	0.000	0.000	0.000	0.000	0.000



Corrosion Search

Material	Environment	Notes	View all data
1000000000	Sulfuric acid	A. 1000000000 1000000000	View all data

Database: NACE International
Temperature: 100 °C
Location: 1000

1-Methyl-Pyrrolidine-2-One

Explore this substance

Properties: Molecular Weight, Melting Point, Boiling Point, Density, etc.

Eu₂Ga₂Ge₅ ht charge carrier mobility

Property	Temperature	Result	IPF ID	Reference	Cyclographic Database
$\mu_{n, 111}^{111}$	T = 2 K	hole field mobility	P10000	15077 Fischer (2015)	SC10000
$\mu_{n, 111}^{111}$	T = 300 K	hole field mobility	P10000	15077 Fischer (2015)	SC10000



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