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2021年CALIS培训周

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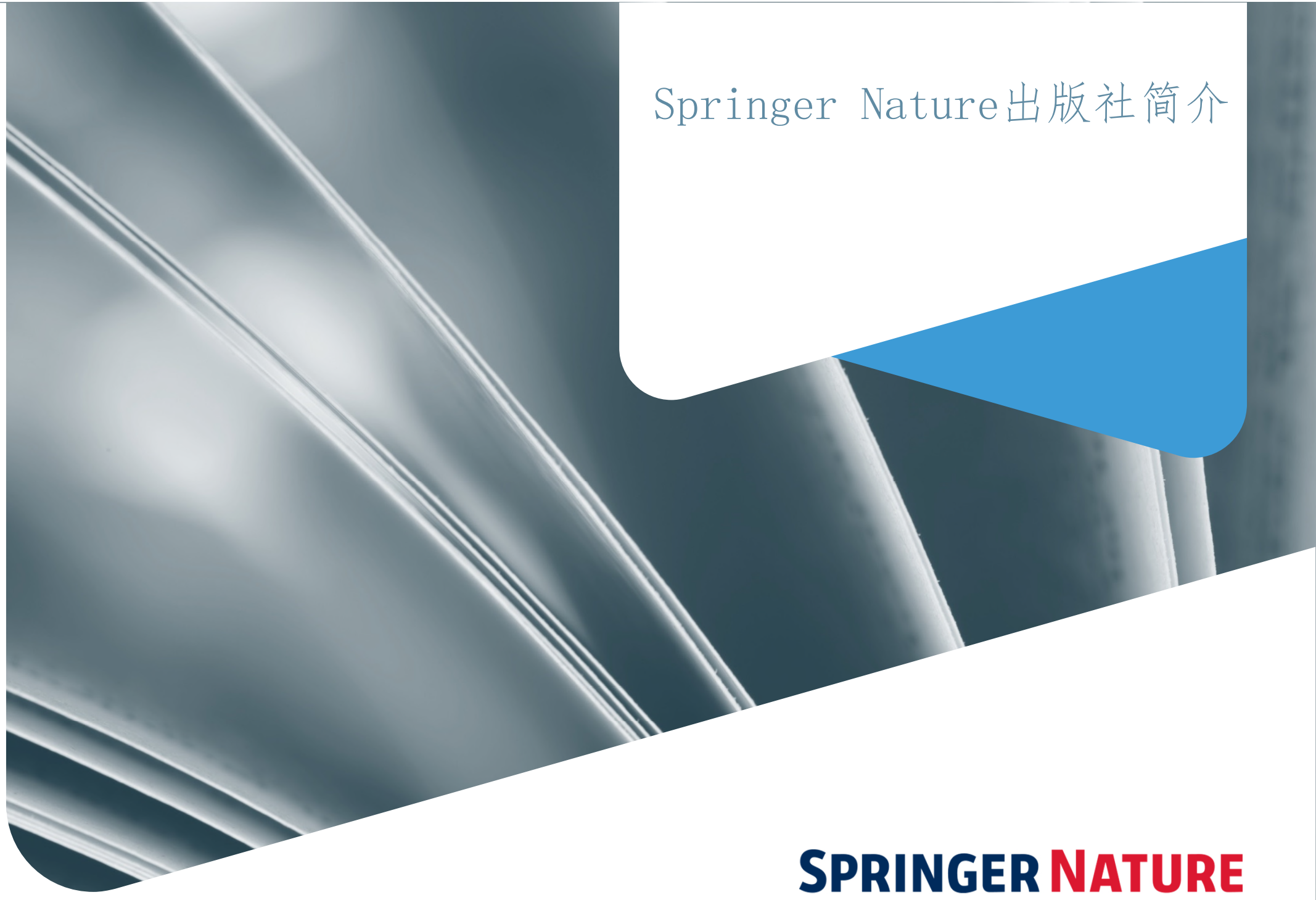

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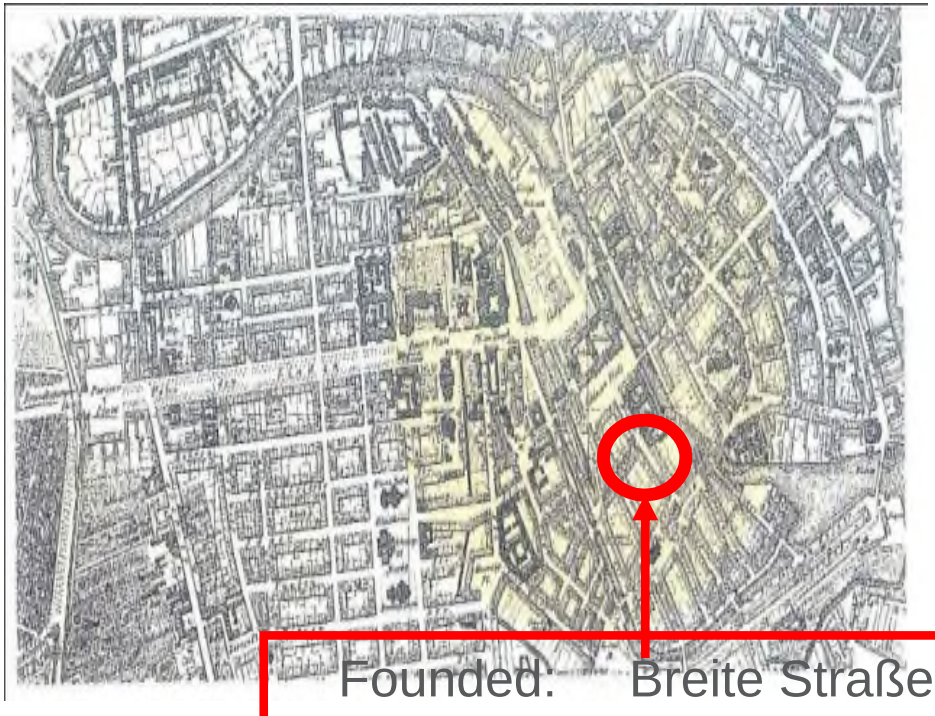
Springer 于1842年始建于柏林，拥有175年的历史……



历史沿革

Springer 收购：Current Medicine Group, Humana Press, Bohn Stafleu van Loghum 和 BioMed Central.
2005-2010

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2004

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1889 A.E. Kluwer在荷兰成立出版社

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	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
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	Humanities, Social Sciences and Law	人文社科和法律

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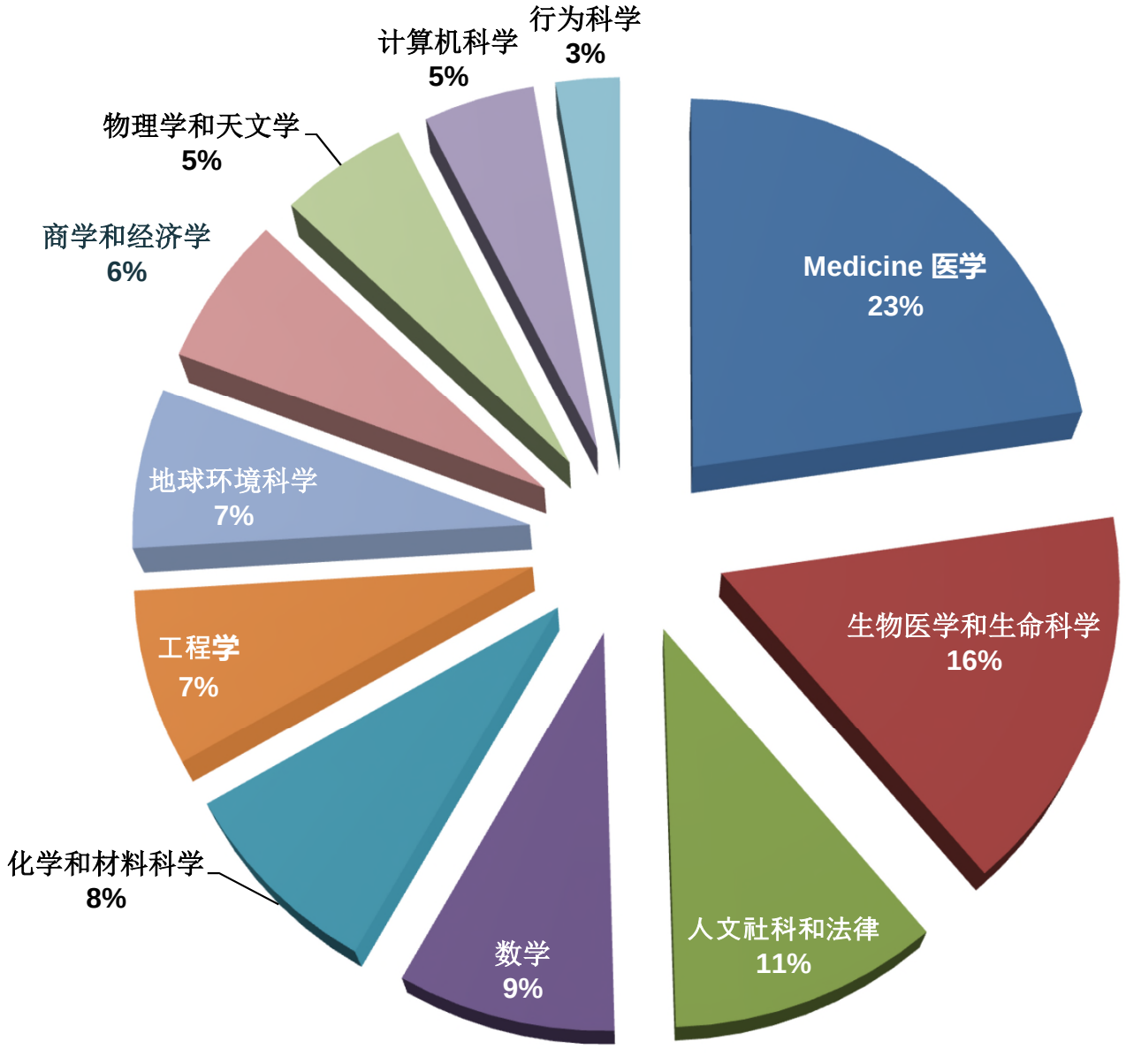

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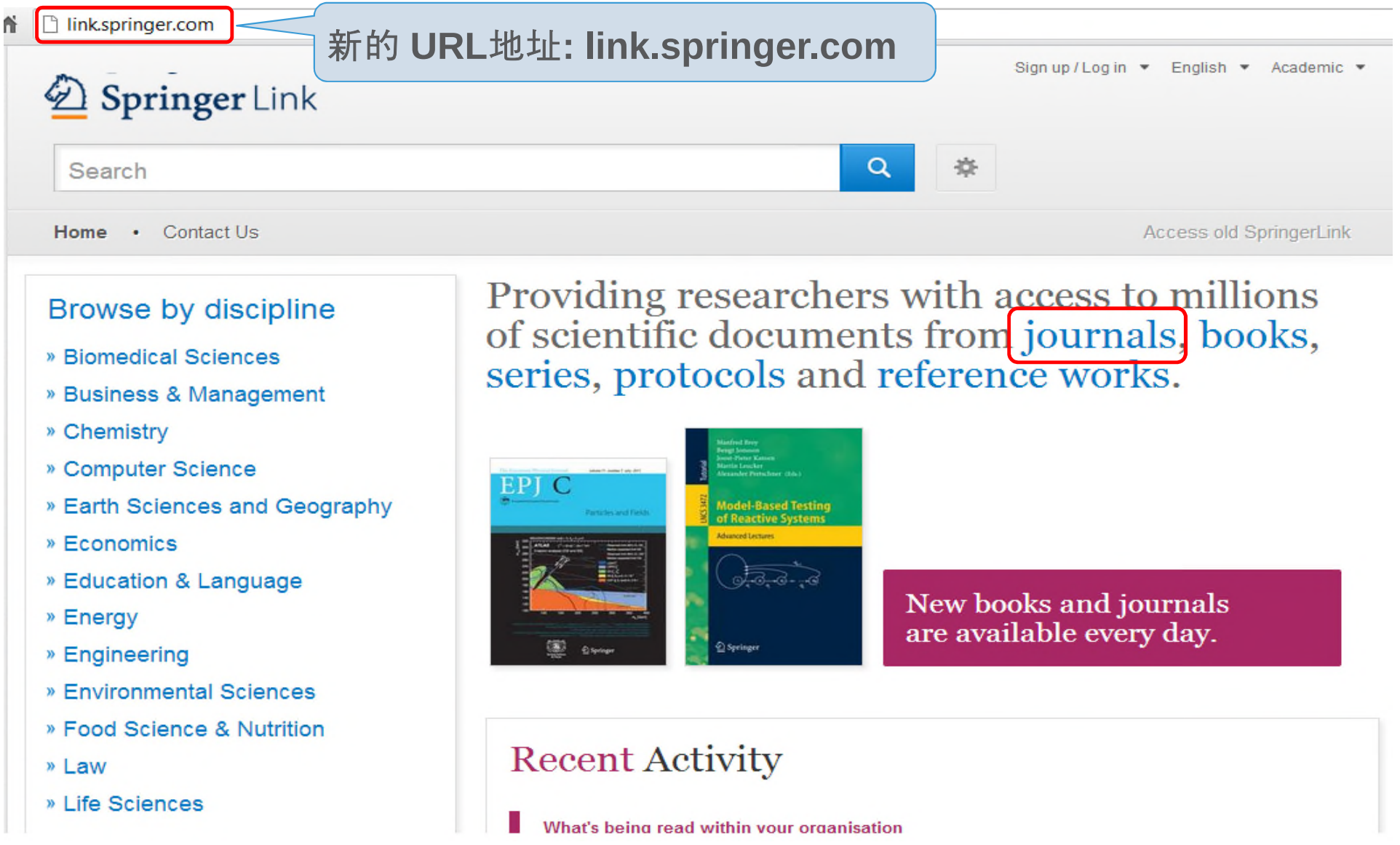

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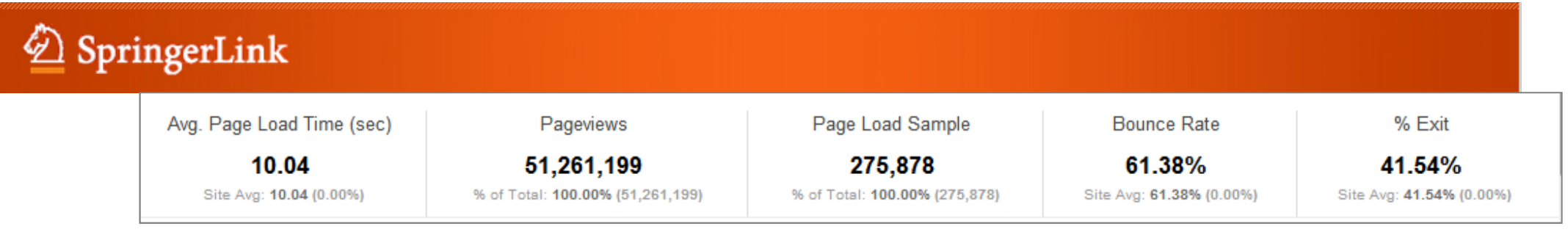

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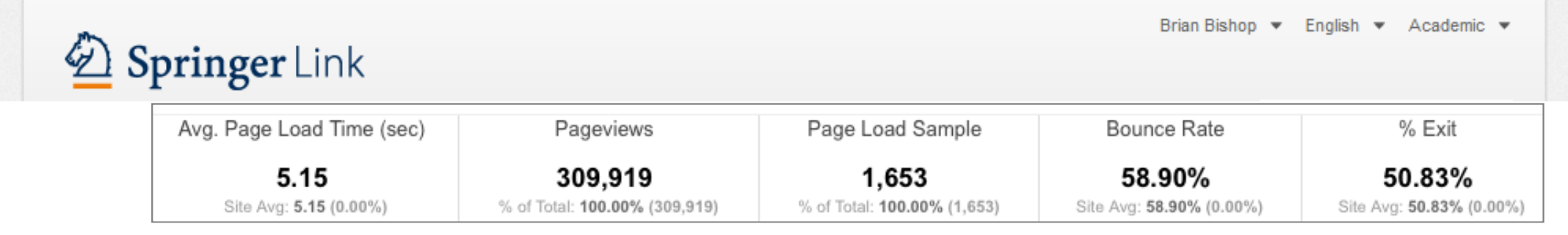

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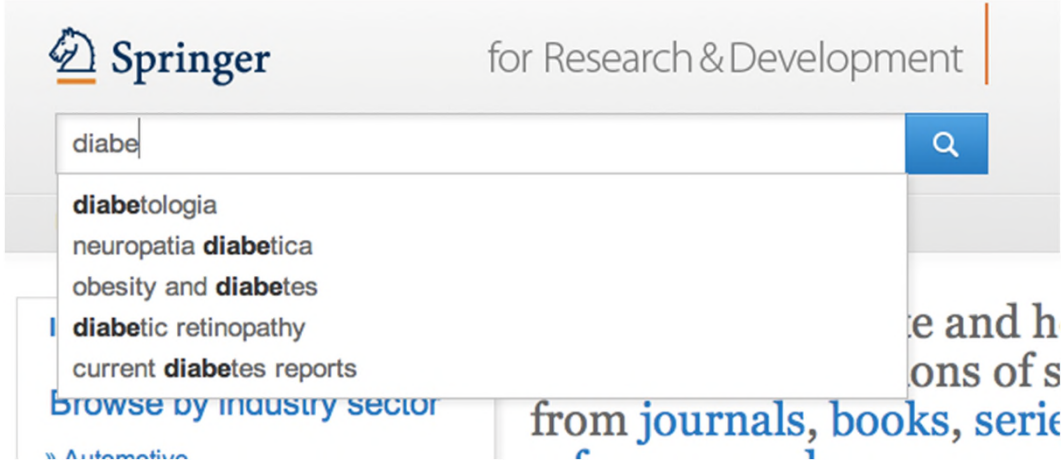
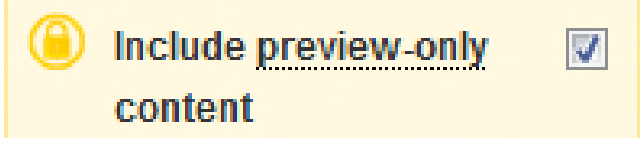
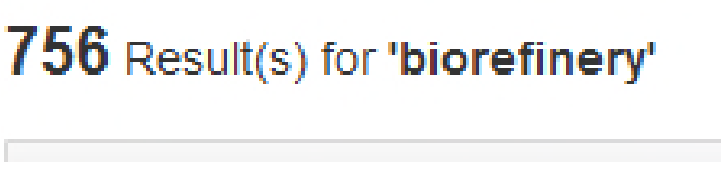


每个文件可以预览两页

显示所有查询结果





SpringerLink平台新增功能

直接链接到HTML部分

Results

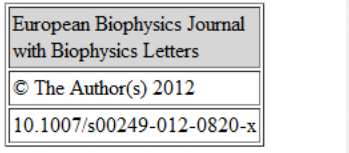
Patient characteristics

Between 11/04/2003 and 12/13/2004, sevent
seen in this initial cohort. Table 1 summarizes

Table 1 Baseline demographics and clinical cha

Baseline characteristics
Patients evaluable/enrolled
Gender: Female %

改进后的 HTML



Review

Validation of macro

Michal Hammel[1]

(1) Lawrence Berkeley National Laboratory,

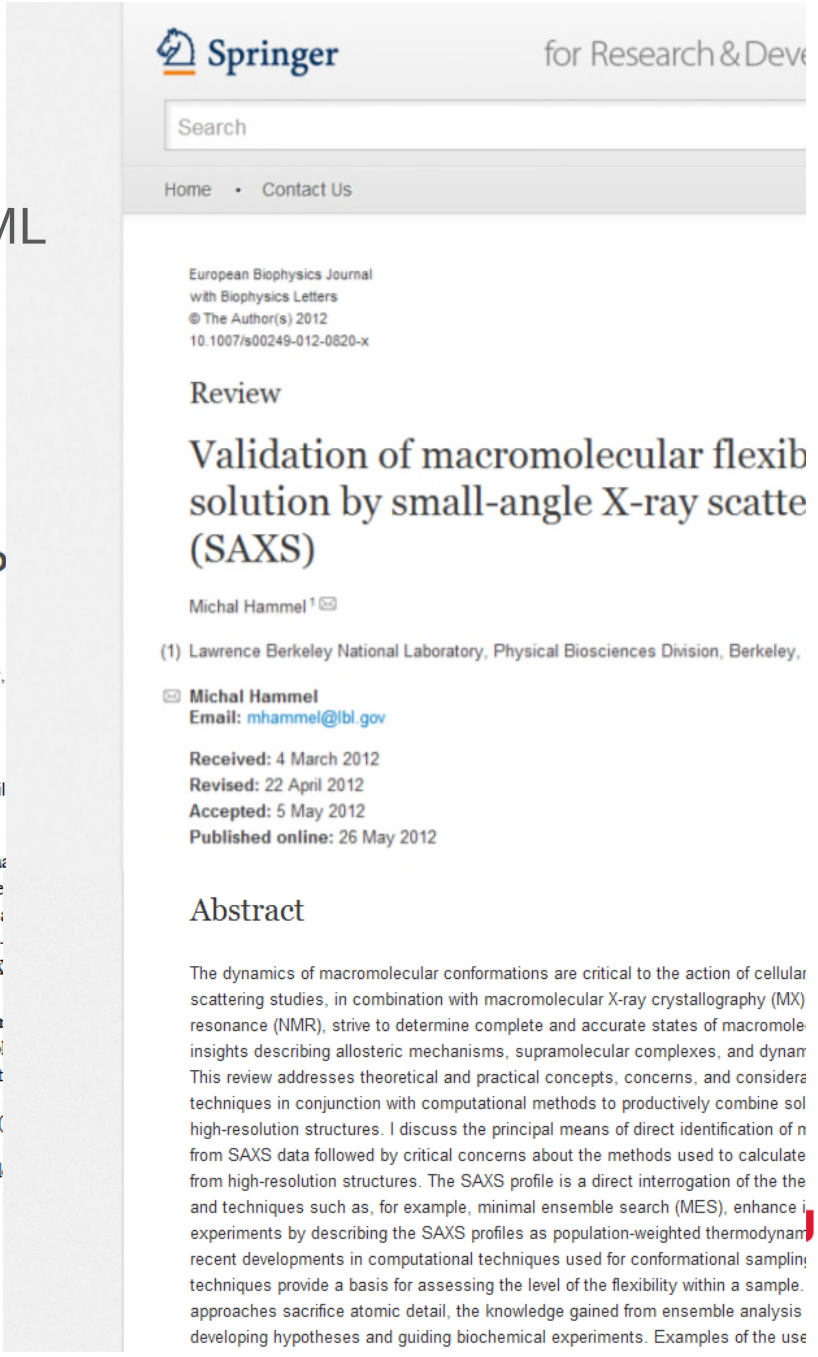
Michal Hammel
Email: mhammel@lbl.gov

Received: 4 March 2012 **Revised:** 22 April

Abstract
The dynamics of macromolecular conforma
nuclear magnetic resonance (NMR), strive
dynamic molecular machines. This review
combine solution-scattering data with high-
methods used to calculate theoretical SAX
minimal ensemble search (MES), enhance
computational techniques used for conform
detail, the knowledge gained from ensembl
X-ray crystallography, NMR, and comput

Keywords Small-angle X-ray scattering (

Special Issue: Scattering techniques in biol



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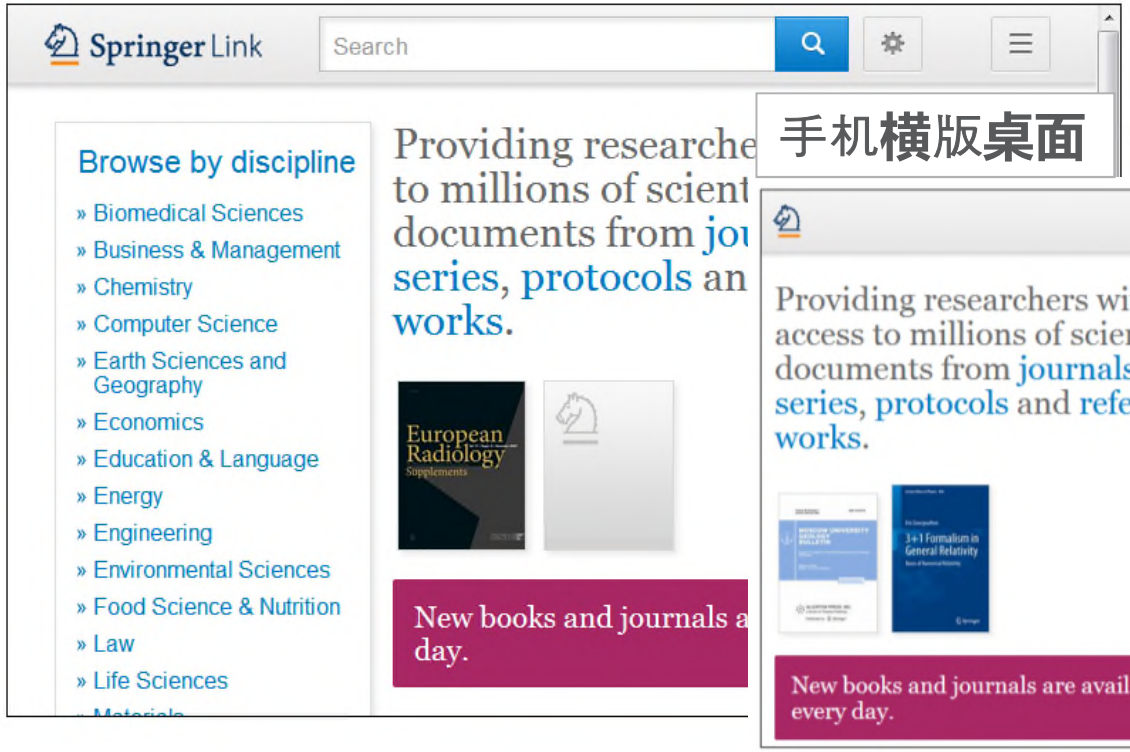

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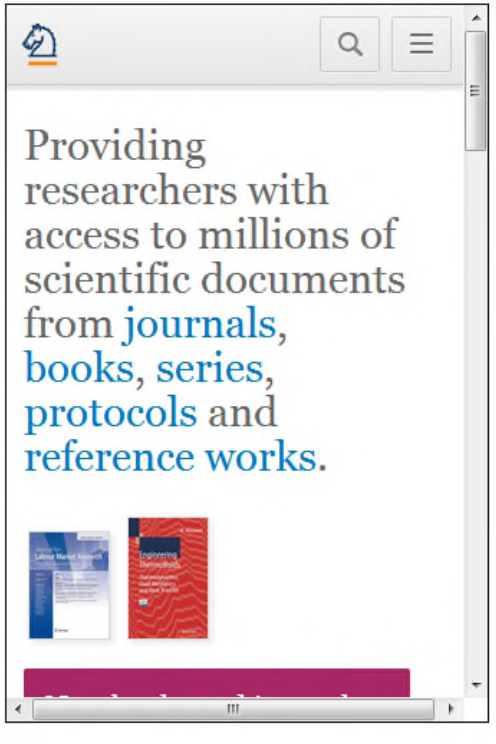

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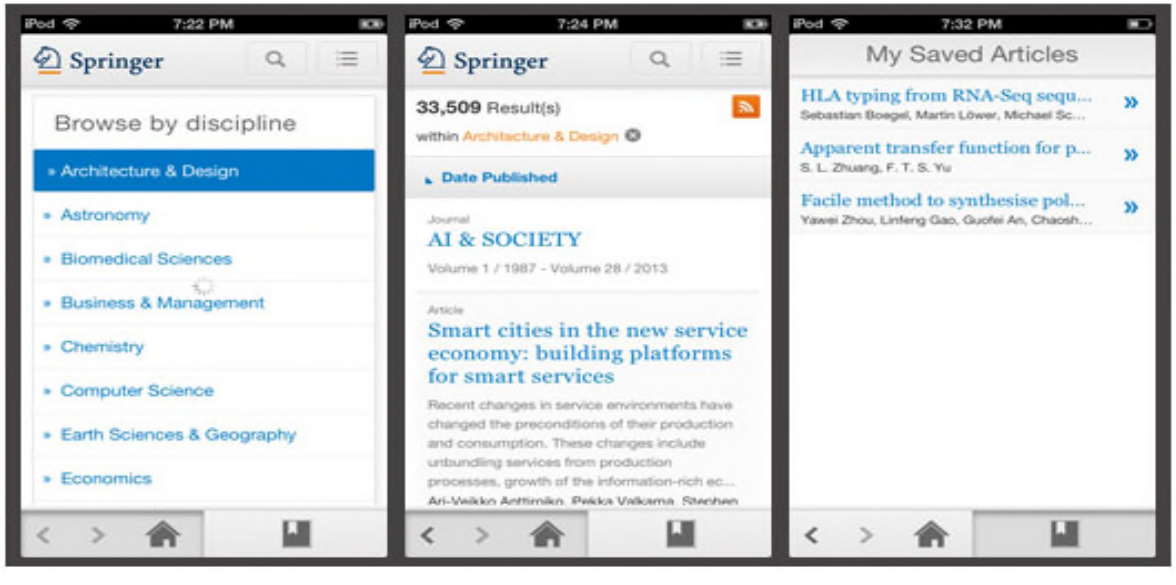

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- 结果聚类
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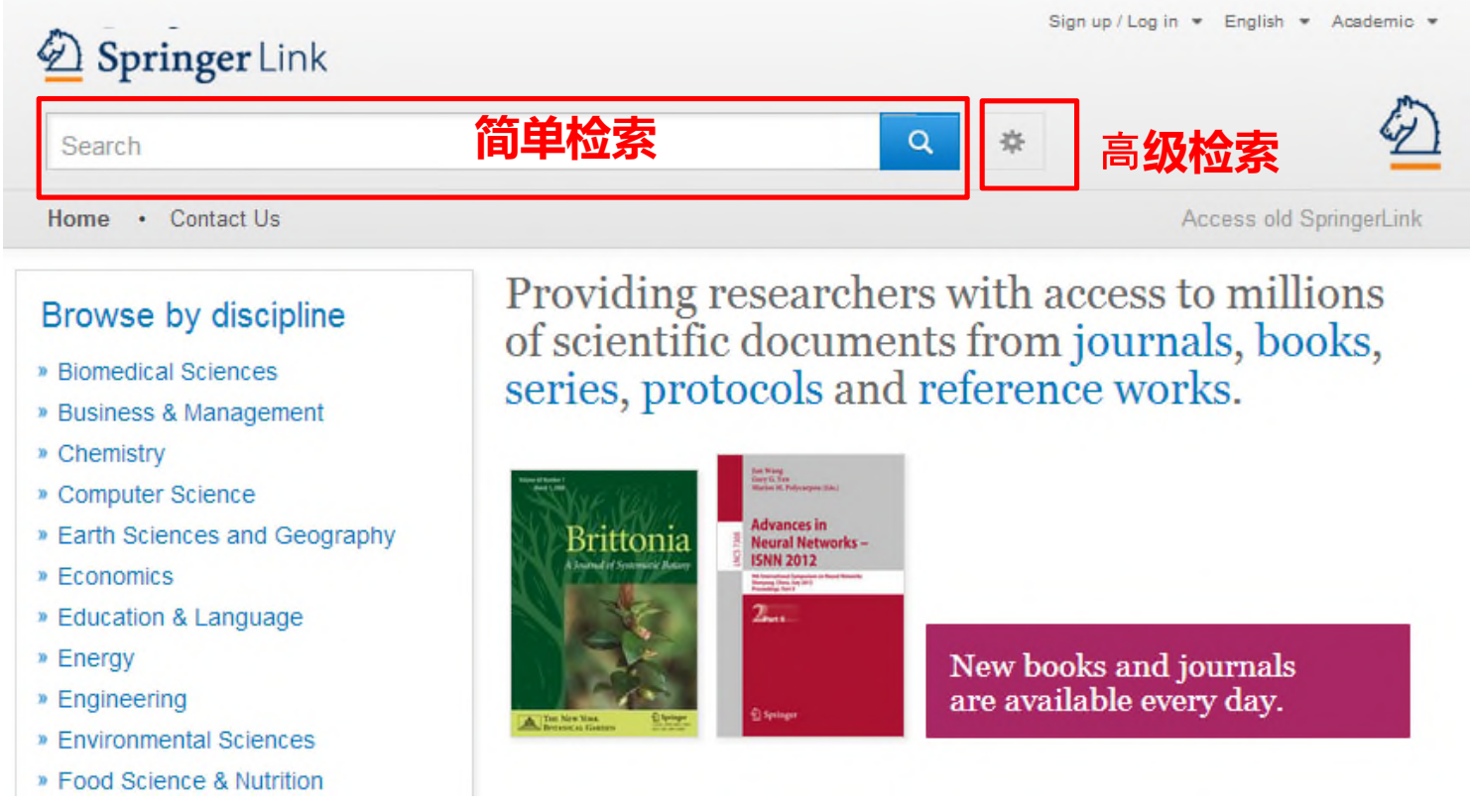

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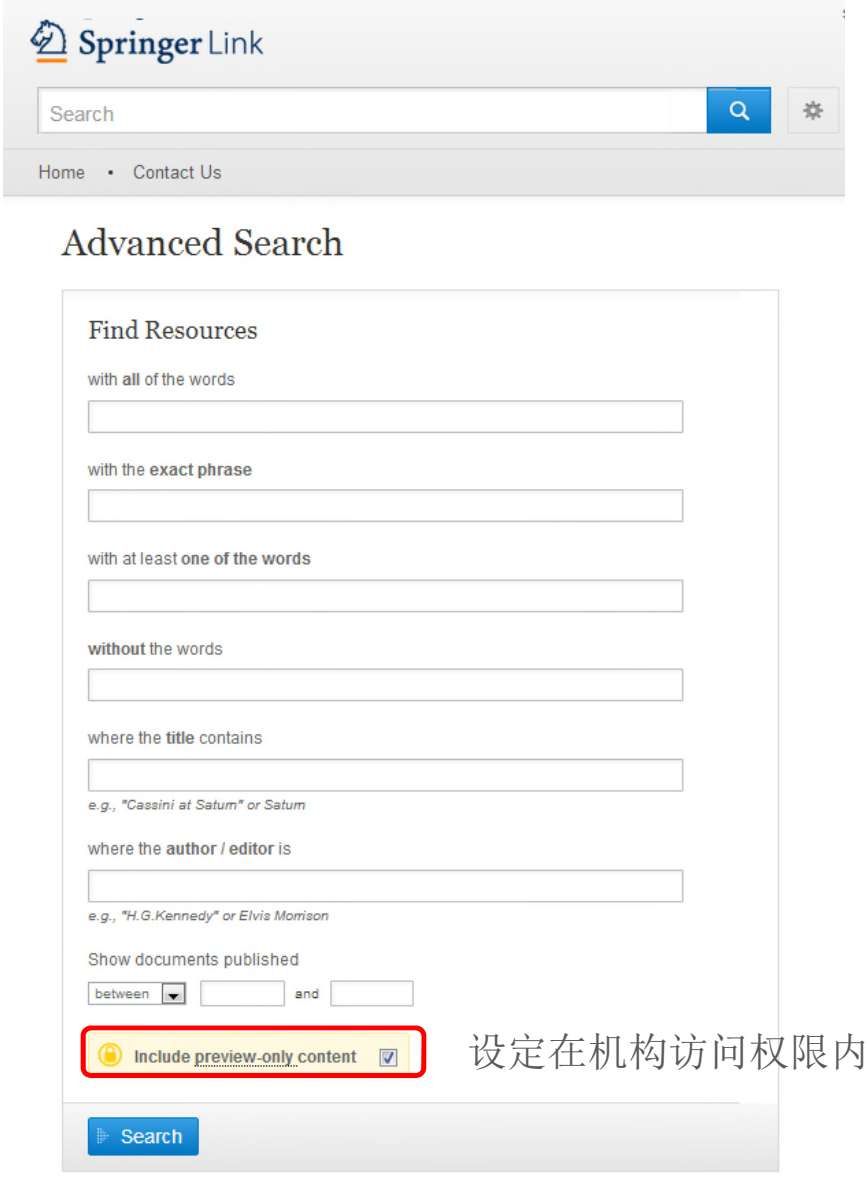

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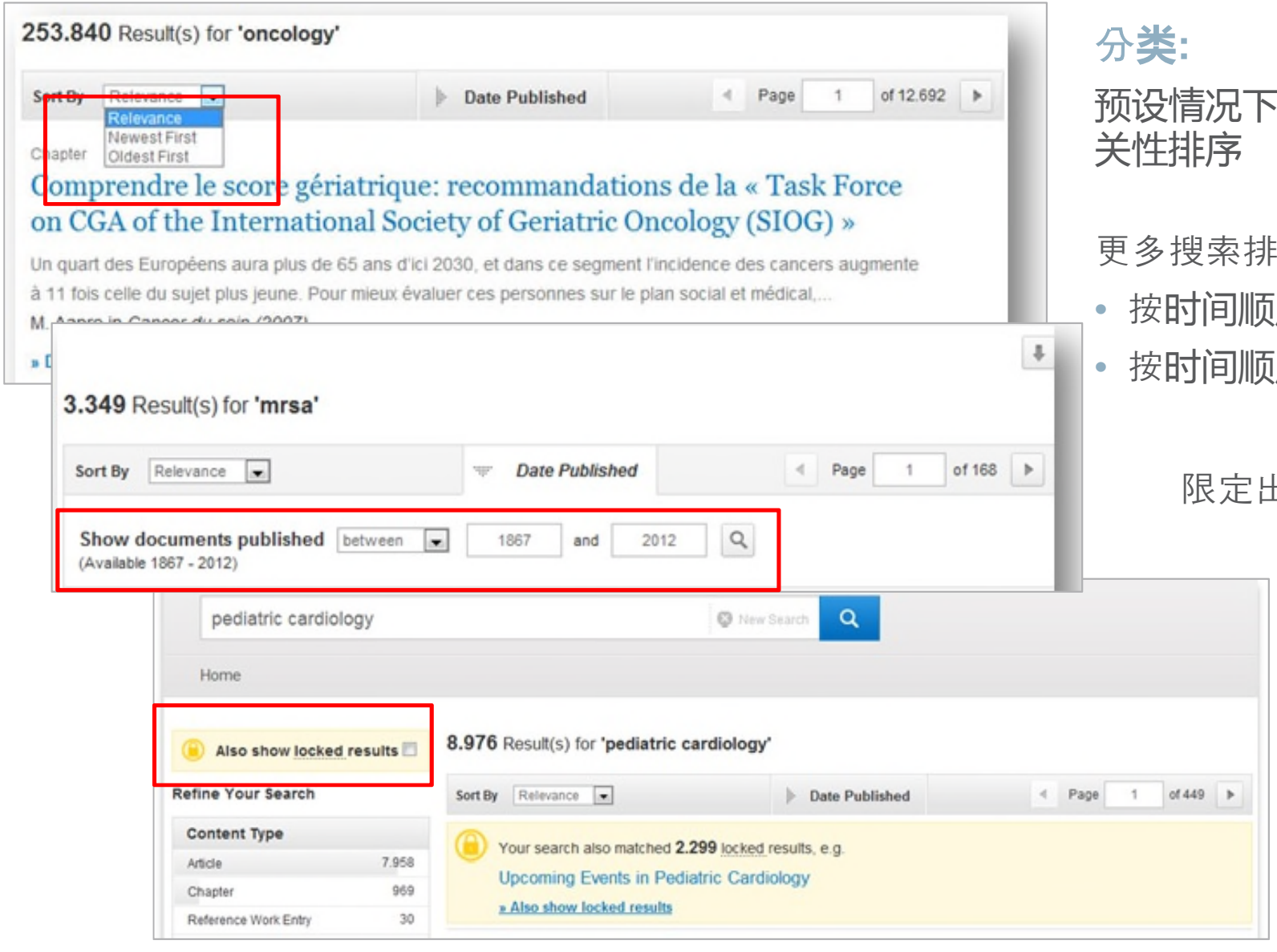

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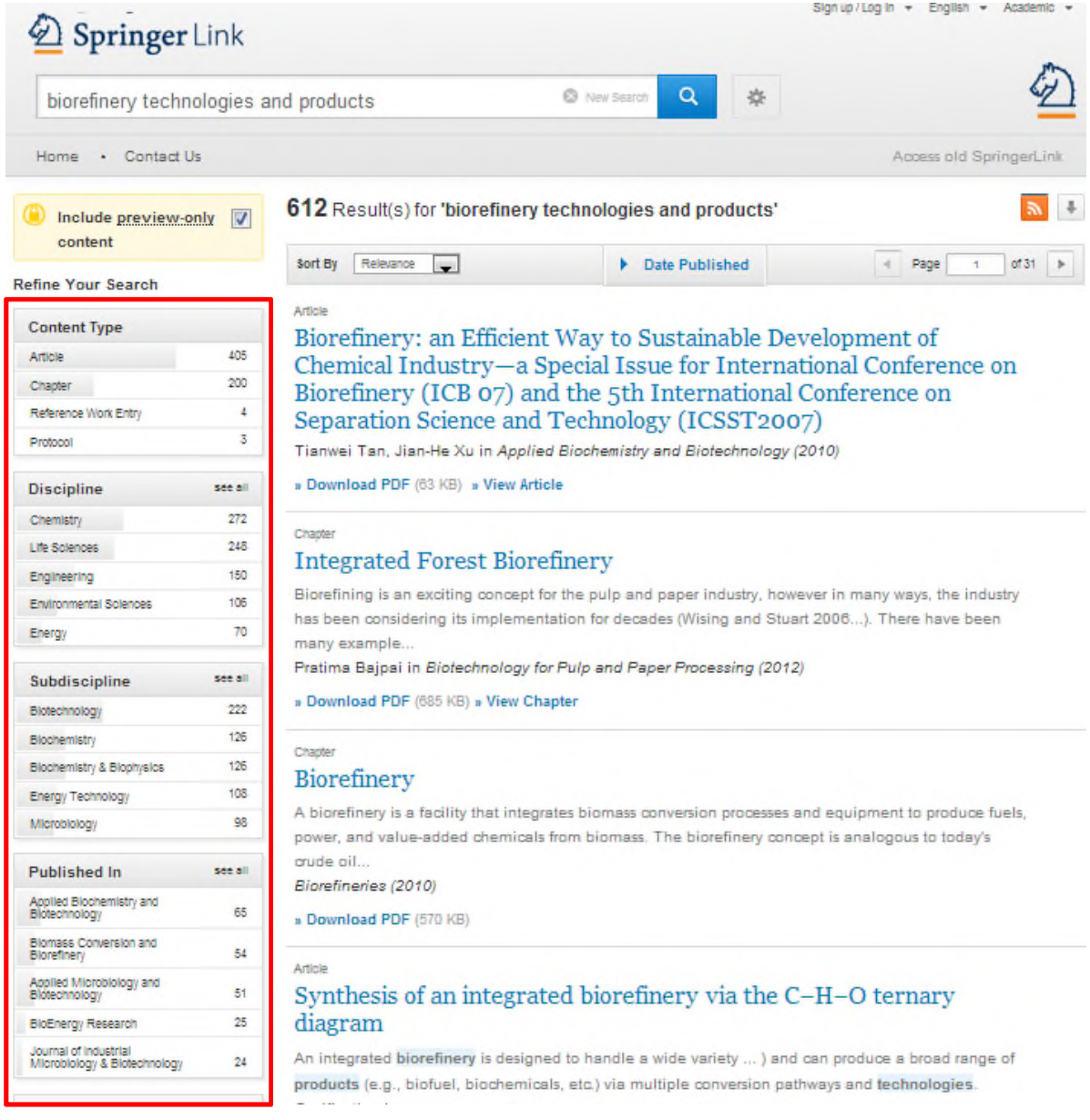

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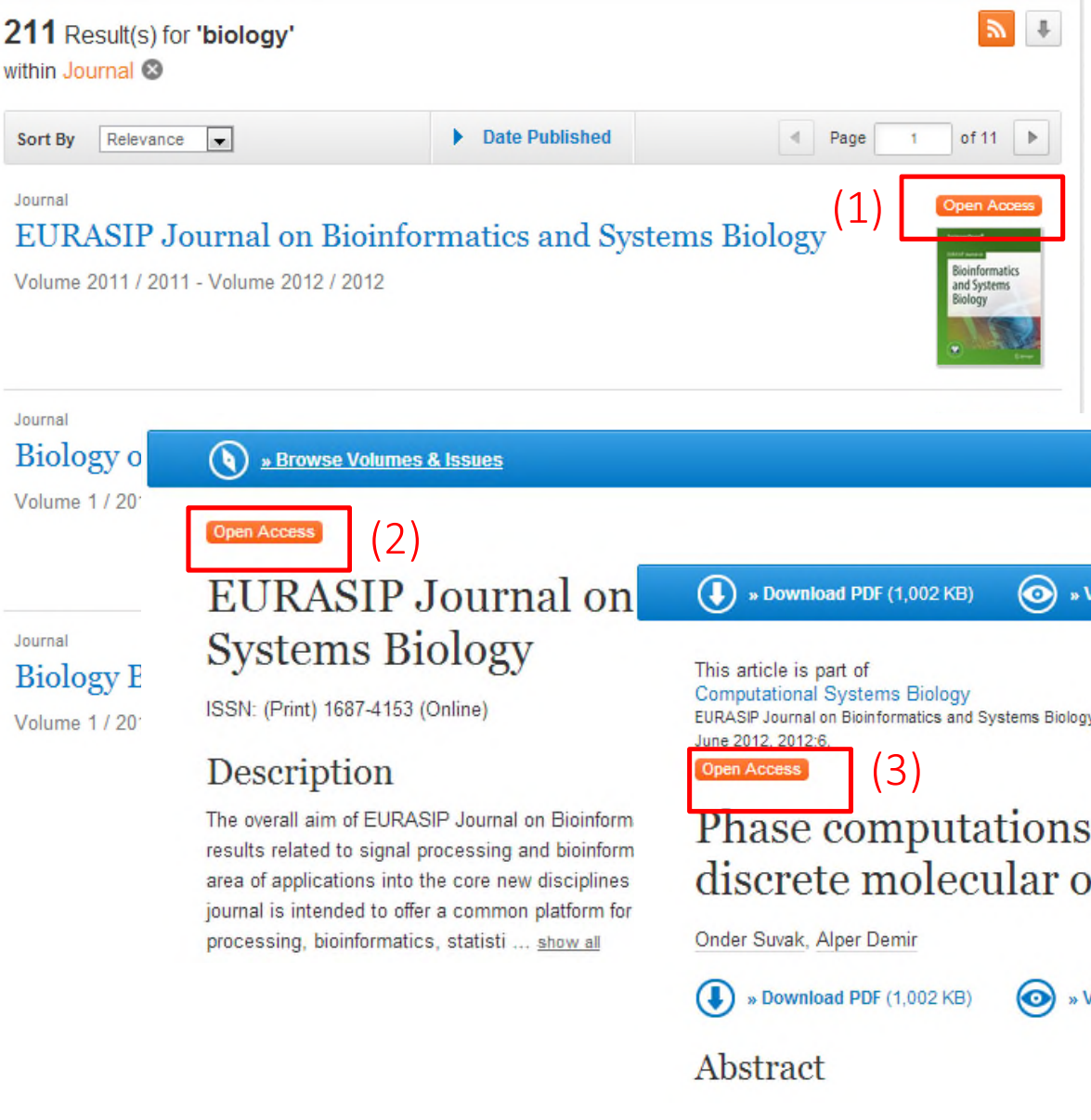

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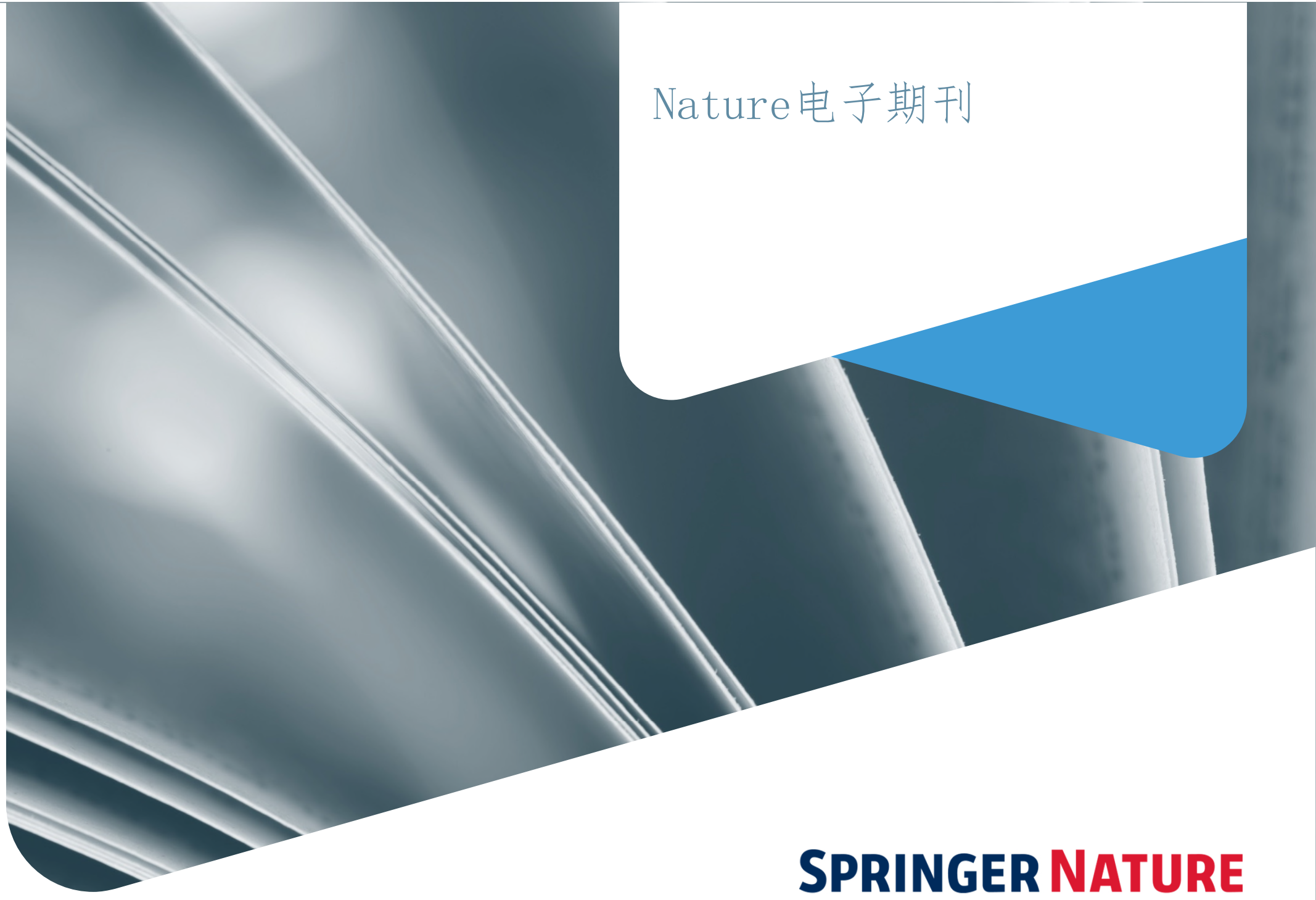

Nature电子期刊

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NATURE

A WEEKLY ILLUSTRATED JOURNAL OF SCIENCE

"To the solid ground
Of Nature trusts the mind which builds for aye."—WORDSWORTH

THURSDAY, NOVEMBER 4, 1869

NATURE: APHORISMS BY GOETHE

NATURE! We are surrounded and embraced by her: powerless to separate ourselves from her, and powerless to penetrate beyond her.

Without asking, or warning, she snatches us up into her circling dance, and whirls us on until we are tired, and drop from her arms.

She is ever shaping new forms: what is, has never yet been; what has been, comes not again. Everything is new, and yet nought but the old.

We live in her midst and know her not. She is incessantly speaking to us, but betrays not her secret. We constantly act upon her, and yet have no power over her.

The one thing she seems to aim at is Individuality; yet she cares nothing for individuals. She is always building up and destroying; but her workshop is inaccessible.

Her life is in her children; but where is the mother? She is the only artist; working-up the most uniform material into utter opposites; arriving, without a trace of effort, at perfection, at the most exact precision, though always veiled under a certain softness.

Each of her works has an essence of its own; each of her phenomena a special characterisation: and yet their diversity is in unity.

She performs a play; we know not whether she sees it herself, and yet she acts for us, the lookers-on.

Incessant life, development, and movement are in her, but she advances not. She changes for ever and ever, and rests not a moment. Quietude is inconceivable to her, and she has laid her curse upon rest. She is firm. Her steps are measured, her exceptions rare, her laws unchangeable.

She has always thought and always thinks; though not as a man, but as Nature. She broods over

all-comprehending idea, which no searching can find out.

Mankind dwell in her and she in them. With all men she plays a game for love, and rejoices the more they win. With many, her moves are so hidden, that the game is over before they know it.

That which is most unnatural is still Nature; the stupidest philistinism has a touch of her genius. Whoso cannot see her everywhere, sees her nowhere rightly.

She loves herself, and her innumerable eyes and affections are fixed upon herself. She has divided herself that she may be her own delight. She causes an endless succession of new capacities for enjoyment to spring up, that her insatiable sympathy may be assuaged.

She rejoices in illusion. Whoso destroys it in himself and others, him she punishes with the sternest tyranny. Whoso follows her in faith, him she takes as a child to her bosom.

Her children are numberless. To none is she altogether miserly; but she has her favourites, on whom she squanders much, and for whom she makes great sacrifices. Over greatness she spreads her shield.

She tosses her creatures out of nothingness, and tells them not whence they came, nor whither they go. It is their business to run, she knows the road.

Her mechanism has few springs—but they never wear out, are always active and manifold.

The spectacle of Nature is always new, for she is always renewing the spectators. Life is

exquisite invention; and death

trivance to get plenty

She wraps

long

© 1869

Launch Issue
1869

- 1869年创刊
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Of Nature trusts the mind that builds for aye." - WORDSWORTH

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人类历史上的重大科学突破

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1896：首次发现 X 射线
1903：发现镭的放射性衰变
1925：发现非洲类人猿——人类的起源
1927：发现电子的波动性——电子显微镜的基石
1932：破解原子由质子、中子和电子组成——原子能时代的开端
1953：发现DNA的双螺旋结构——开启生物学的黄金时代
1958：首次确定蛋白质结构——蛋白质组学
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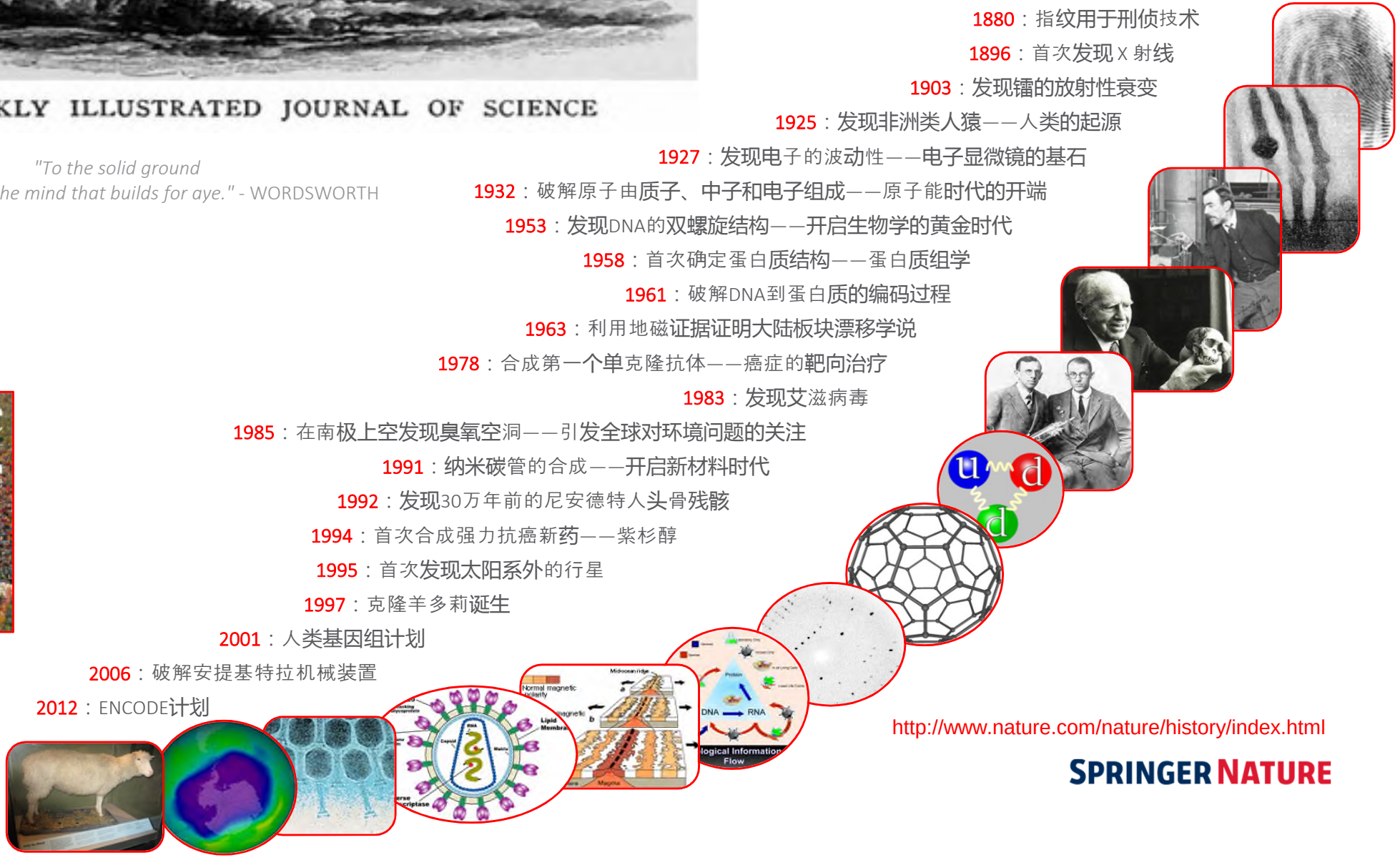

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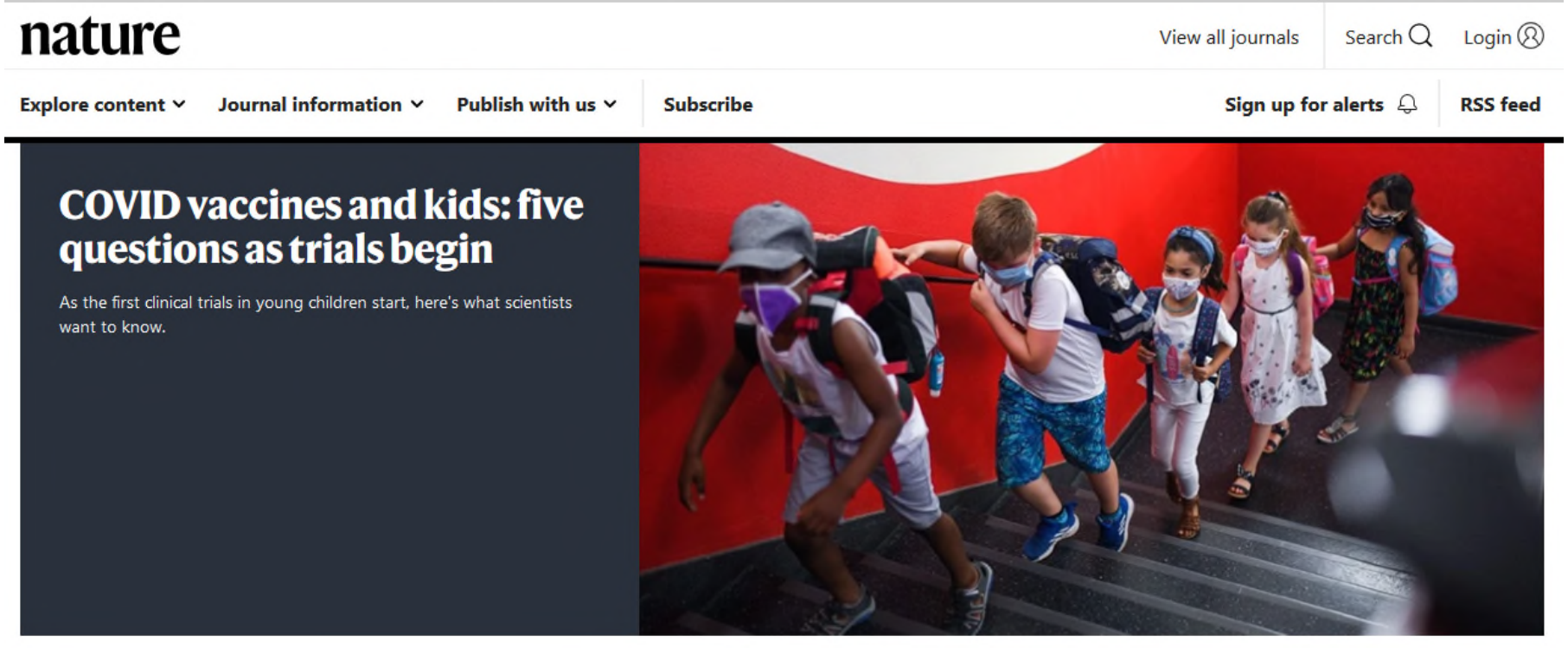

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A

- Acta Pharmacologica Sinica
- American Journal of Gastroenterology
- American Journal of Gastroenterology Supplements

B

- BDJ Open
- BDJ Team
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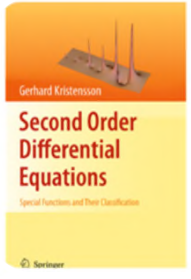

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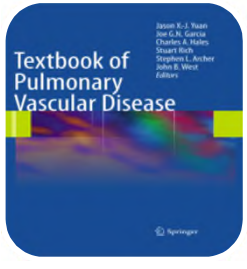

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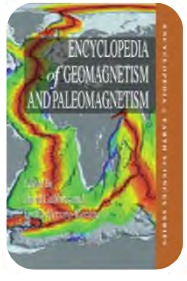

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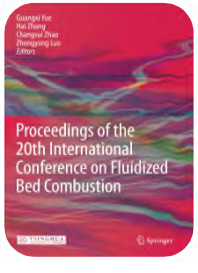

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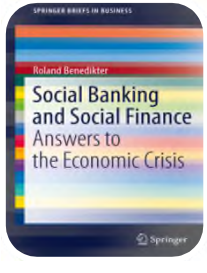

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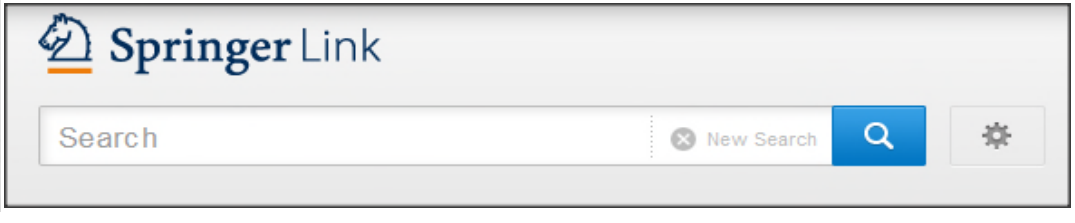

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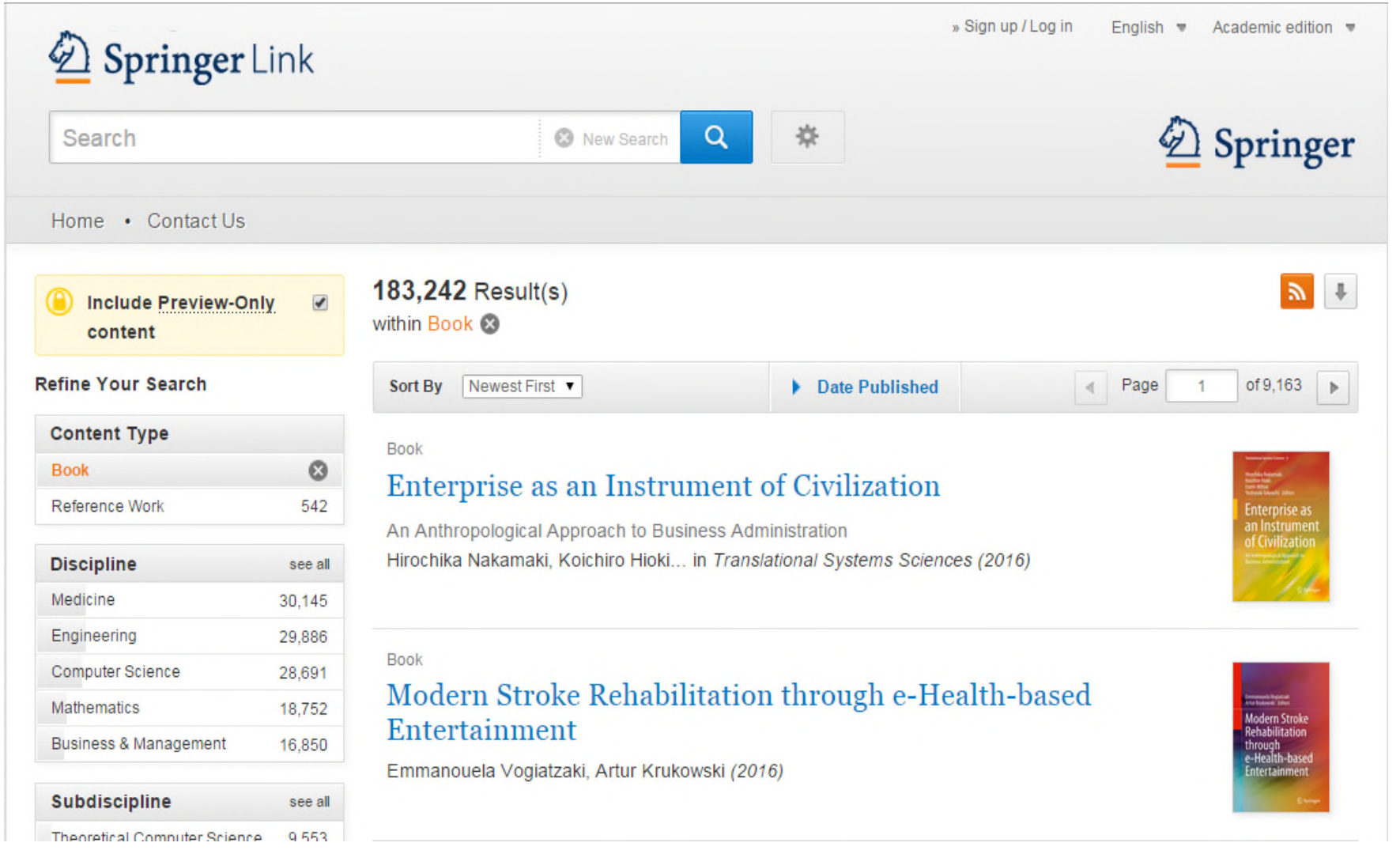

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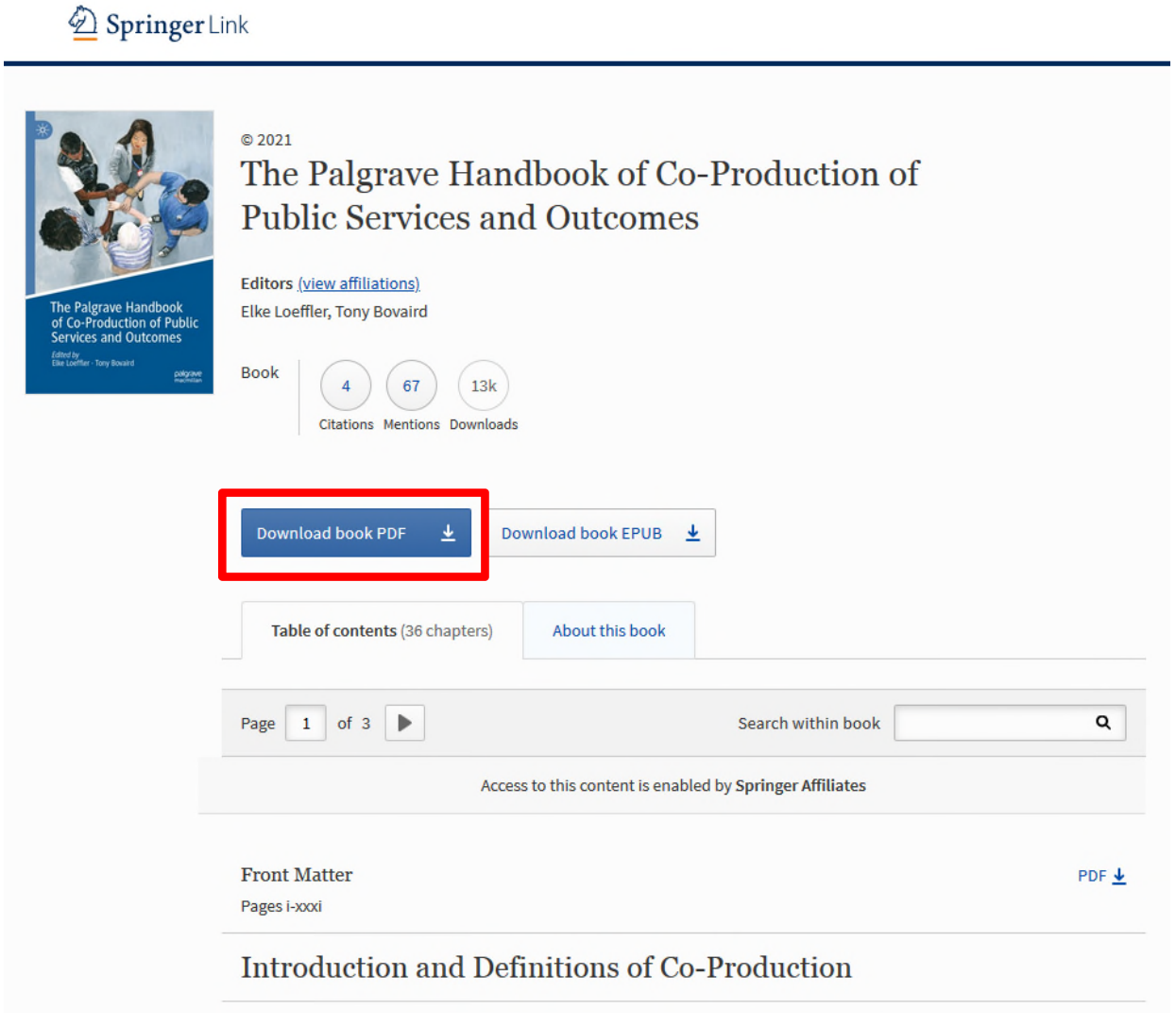

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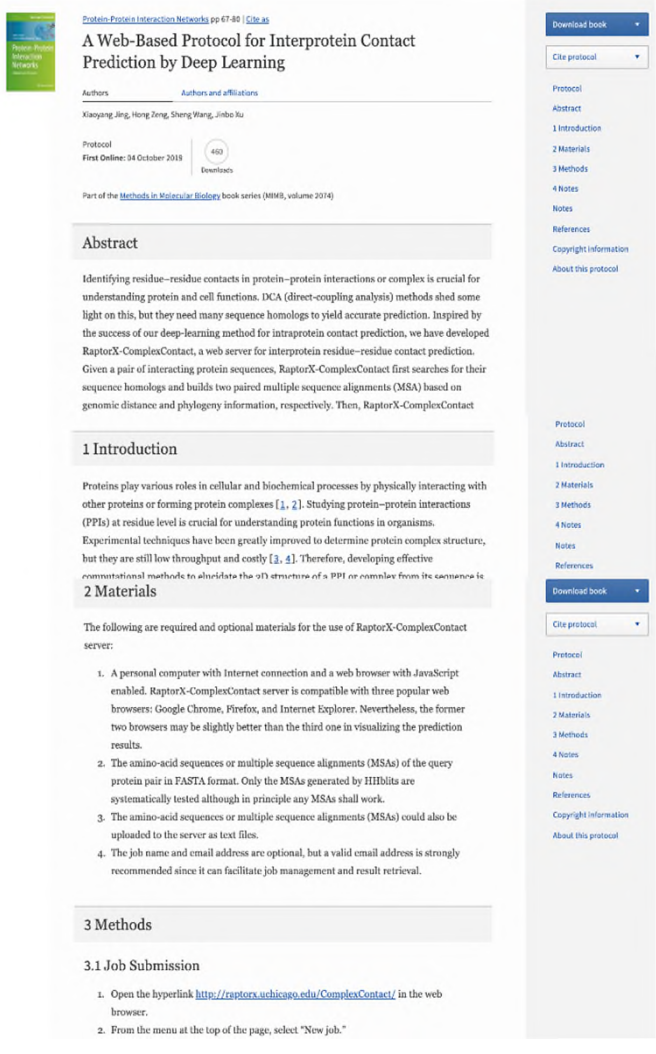

Protein-Protein Interaction Networks pp 67-80 | Cite as

A Web-Based Protocol for Interprotein Contact Prediction by Deep Learning

Authors | Authors and affiliations

Xiaoyang Jing, Hong Zeng, Sheng Wang, Jinbo Xu

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Abstract

Identifying residue–residue contacts in protein–protein interactions or complex is crucial for understanding protein and cell functions. DCA (direct-coupling analysis) methods shed some light on this, but they need many sequence homologs to yield accurate prediction. Inspired by the success of our deep-learning method for intraprotein contact prediction, we have developed RaptorX-ComplexContact, a web server for interprotein residue–residue contact prediction. Given a pair of interacting protein sequences, RaptorX-ComplexContact first searches for their sequence homologs and builds two paired multiple sequence alignments (MSA) based on genomic distance and phylogeny information, respectively. Then, RaptorX-ComplexContact

1 Introduction

Proteins play various roles in cellular and biochemical processes by physically interacting with other proteins or forming protein complexes [1, 2]. Studying protein–protein interactions (PPIs) at residue level is crucial for understanding protein functions in organisms. Experimental techniques have been greatly improved to determine protein complex structure, but they are still low throughput and costly [3, 4]. Therefore, developing effective computational methods to elucidate the 3D structure of a PPI or complex from its sequence is

2 Materials

The following are required and optional materials for the use of RaptorX-ComplexContact server:

1. A personal computer with Internet connection and a web browser with JavaScript enabled. RaptorX-ComplexContact server is compatible with three popular web browsers: Google Chrome, Firefox, and Internet Explorer. Nevertheless, the former two browsers may be slightly better than the third one in visualizing the prediction results.
2. The amino-acid sequences or multiple sequence alignments (MSAs) of the query protein pair in FASTA format. Only the MSAs generated by HHblits are systematically tested although in principle any MSAs shall work.
3. The amino-acid sequences or multiple sequence alignments (MSAs) could also be uploaded to the server as text files.
4. The job name and email address are optional, but a valid email address is strongly recommended since it can facilitate job management and result retrieval.

3 Methods

3.1 Job Submission

1. Open the hyperlink http://raptorx.uchicago.edu/ComplexContact/ in the web browser.
2. From the menu at the top of the page, select "New job."

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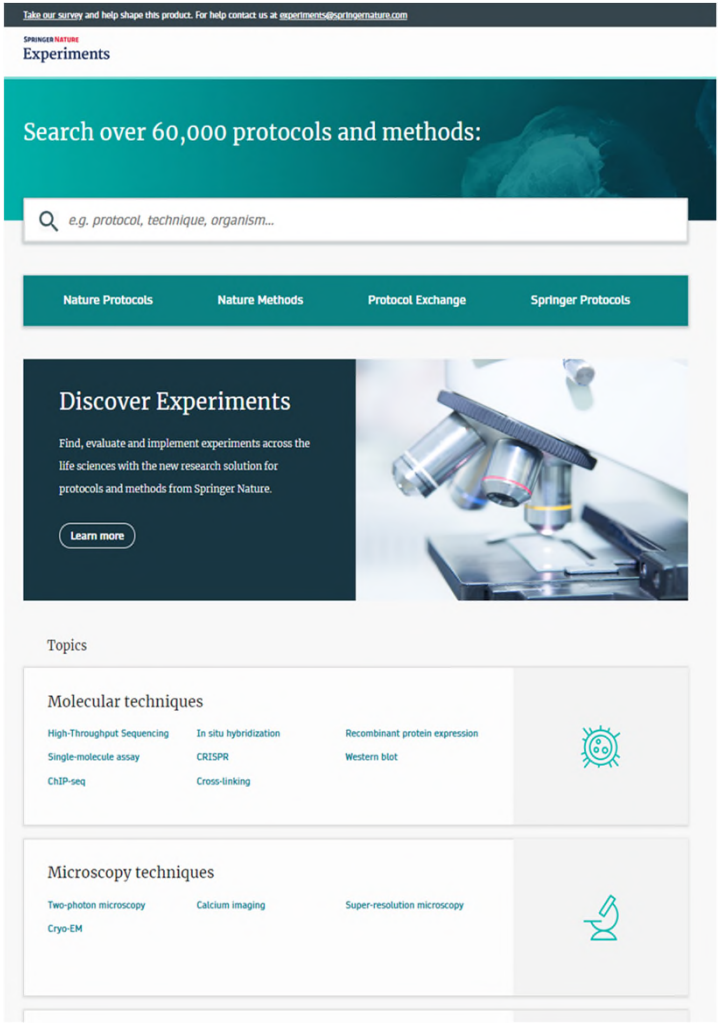

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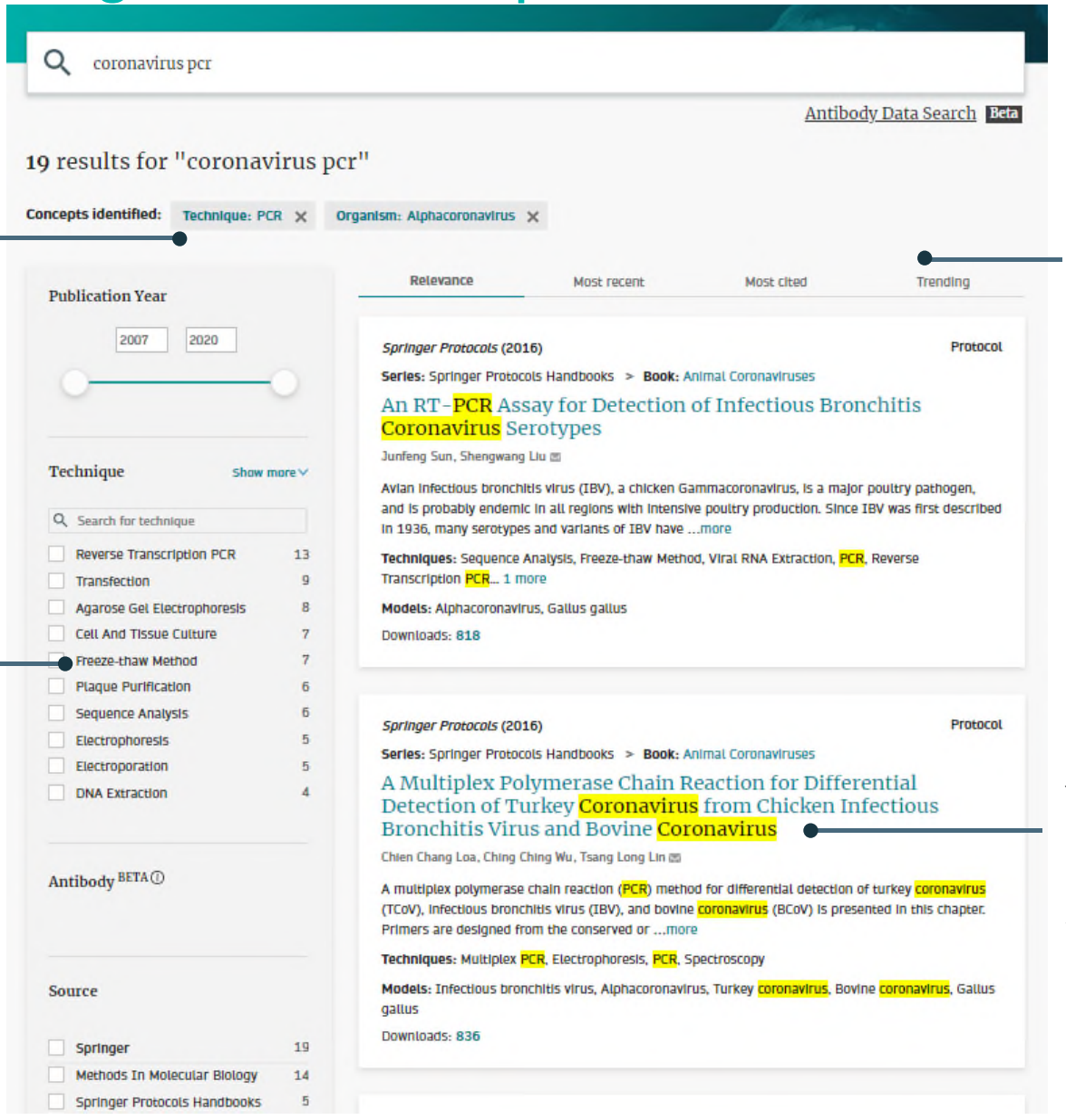

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Biochemical Characterization of Middle East Respiratory Syndrome Coronavirus Spike Protein Proteolytic Processing

Authors:
Gary R. Whittaker [2], Jean 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-convertases. 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, matriptase. Such analysis enables the characterization of cleavage patterns produced by a host protease on a coronavirus spike glycoprotein. less

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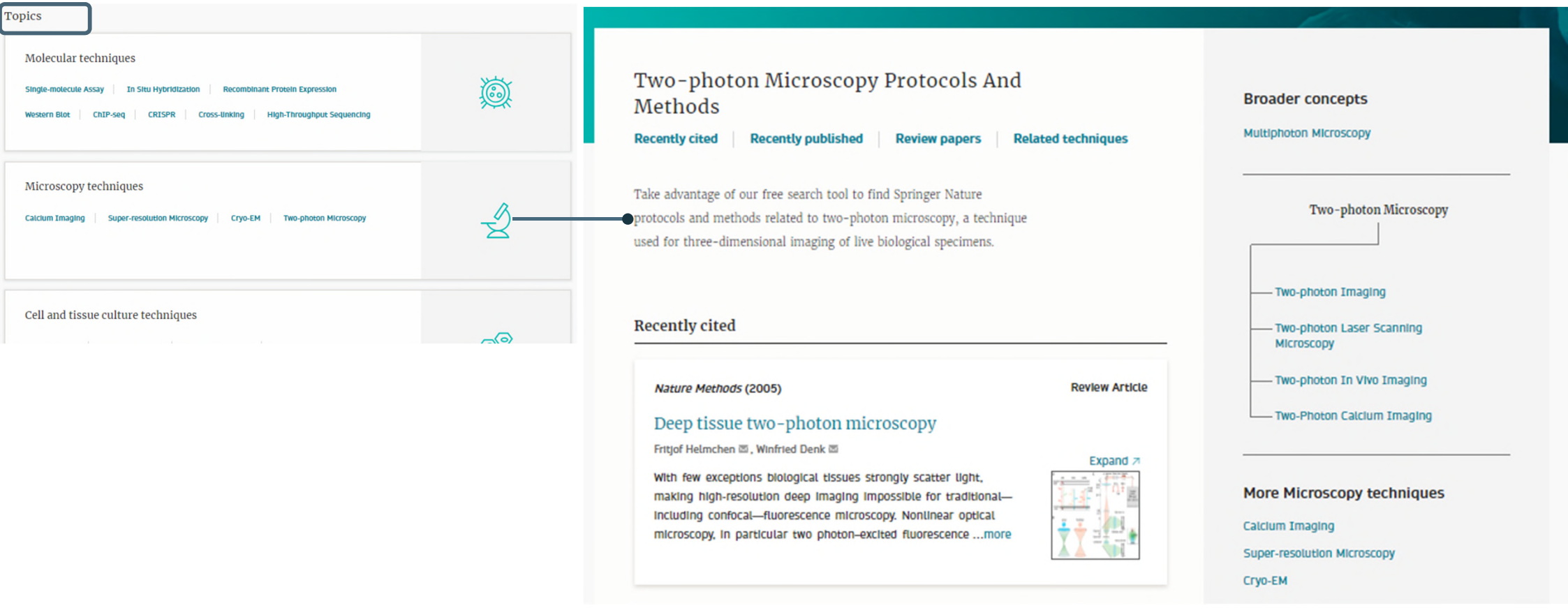

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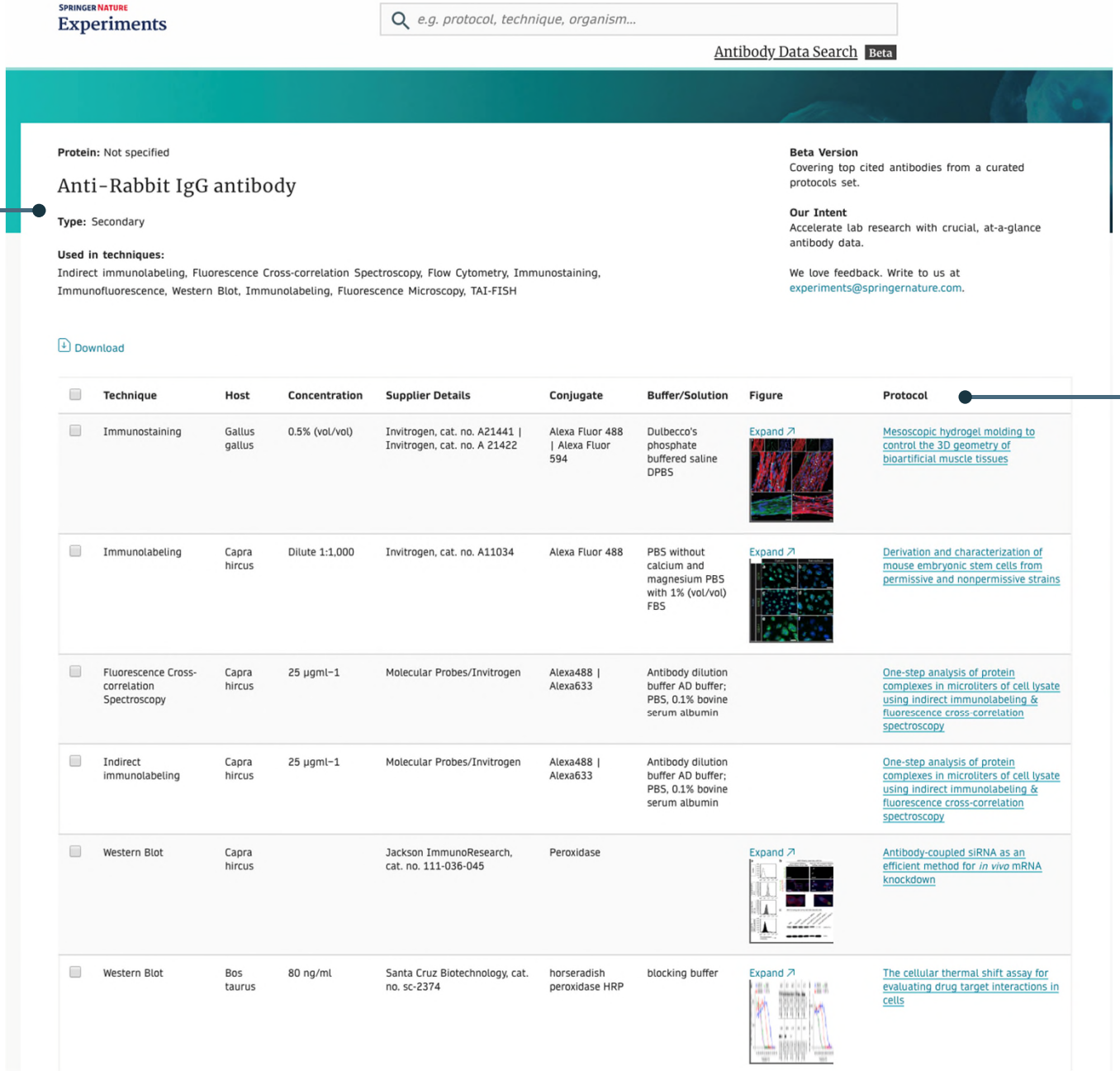

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Immunolabeling	Capra hircus	Dilute 1:1,000	Invitrogen, cat. no. A11034	Alexa Fluor 488	PBS without calcium and magnesium PBS with 1% (vol/vol) FBS	Expand	Derivation and characterization of mouse embryonic stem cells from permissive and nonpermissive strains
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Indirect immunolabeling	Capra hircus	25 µgml−1	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
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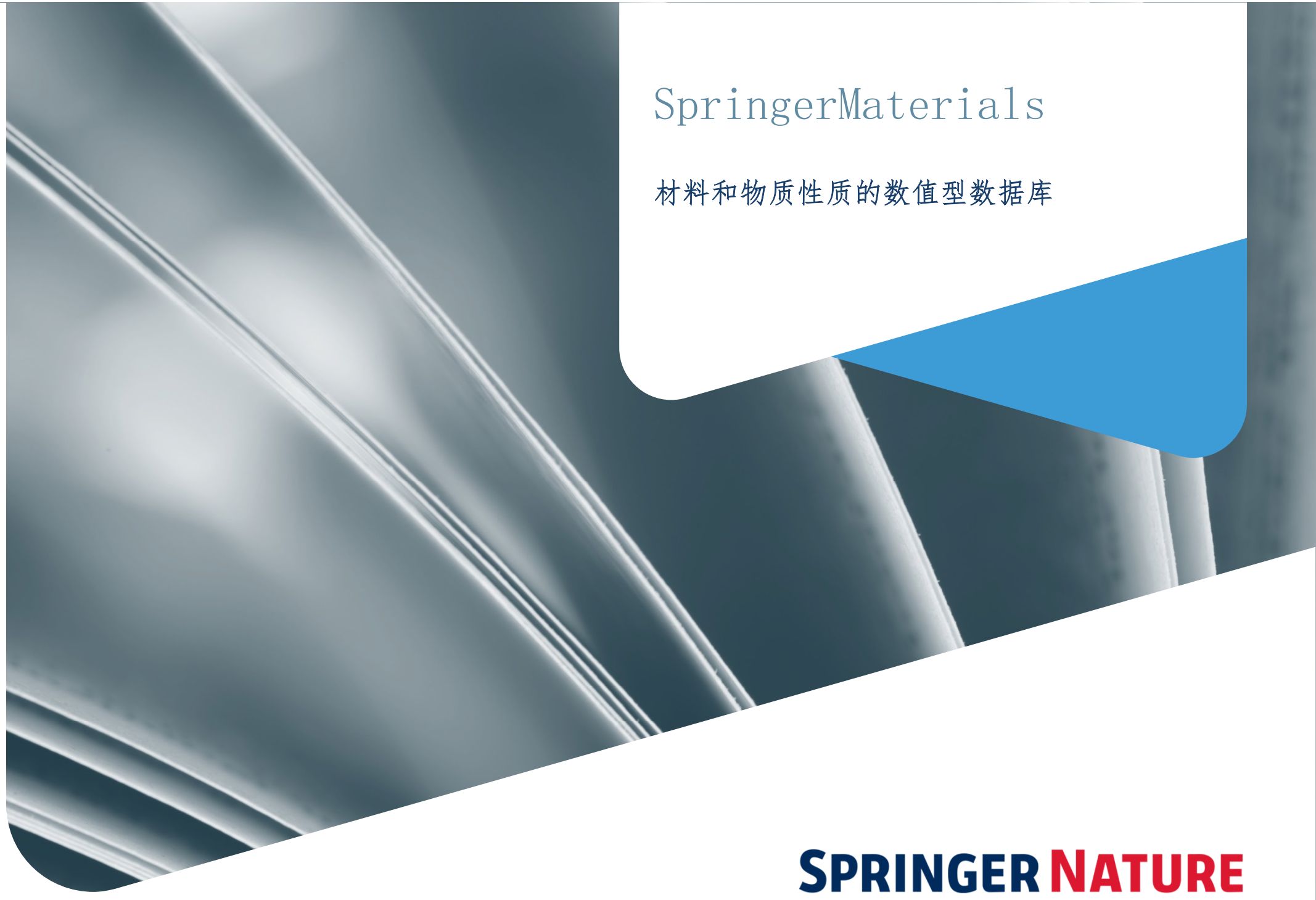

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3 Crystallographic and magnetic properties of perovskite and perovskite-related compounds *)

3.0 Introduction — Einleitung

3.0.1 General remarks – Allgemeines

The perovskites form a family of compounds having a crystal structure similar to that of the mineral perovskite, $CaTiO_3$. There are two classes of materials crystallizing with this general structure type: primarily ionic materials having the ideal chemical formula ABX_3 (A = larger cation, B = smaller cation, X = anion), and alloys having the ideal formula $M^eXM^I_3$ (X = interstitial atom, M^e and M^I are metal atoms). Of these two classes, the former is much larger and the more important.

The stability of the ABX_3 perovskite structure is primarily derived from the electrostatic (Madelung) energy achieved if cations occupy corner-shared octahedra. Thus the first prerequisite for a stable ABX_3 perovskite is the existence of stable, polar octahedral-site building blocks. This, in turn, requires that the B cation have a preference for octahedral coordination and that there be an effective charge on the B cation. Since any A cation must occupy the relatively large anionic interstice created by corner-shared octahedra, a second prerequisite is an appropriate size for the A cation. Where it is too large, the B-X bond length cannot be optimized, and hexagonal stacking with face-shared octahedra becomes competitive. Where the A cation is too small, A-X bonding stabilizes structures having a smaller anionic coordination about the A cation. Thus ABX_3 perovskites are commonly found in fluorides and oxides having B cations with a preference energy for octahedral coordination. By contrast, the chlorides and sulfides, having larger anions, not only require the largest A cations, but also form layer structures, where the A cations are missing, because they have anionic d orbitals energetically available for orbital hybridization.

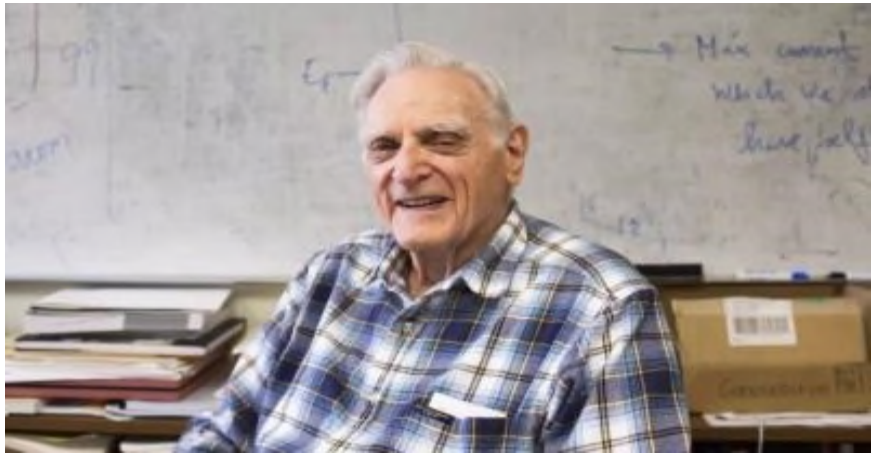
There are many perovskite-related structures, and these have been included in these tables. For example, the structure can tolerate mixed systems such as $A_{1-x}A'_xBX_3$ and $AB_{1-y}B'_yX_3$. A-cationic vacancies □ as in $□_{1-x}A_xBX_3$, and cationic ordering as in $A_2BB'X_6$. Although anion-defficient perovskites have been reported many times, the anion vacancies ⊕ are probably not distributed randomly. In compounds containing Fe^{3+} ions, for example, they appear to condense in pairs at individual B-site octahedra to convert the local anion interstice from an octahedron to a tetrahedron. In

Die Perowskite sind eine Gruppe von Verbindungen mit der gleichen Kristallstruktur wie das Mineral Perowskit, $CaTiO_3$. Man unterscheidet zwei Klassen von Substanzen, die in diesem allgemeinen Strukturtyp kristallisieren: in erster Linie Ionenverbindungen mit der idealen chemischen Formel ABX_3 (A = größeres Kation, B = kleineres Kation, X = Anion) und Legierungen mit der idealen Formel $M^eXM^I_3$ (X = Zwischengitteratom, M^e und M^I = Metallatome). Von diesen beiden Klassen ist die erstere wesentlich umfangreicher und wichtiger.

Die Stabilität der ABX_3-Perowskitstruktur beruht in erster Linie auf der elektrostatischen (Madelung-) Energie, die dann zustande kommt, wenn Kationen Oktaeder mit gemeinsamen Ecken besetzen. So ist die Existenz von stabilen, polaren Oktaeder-Bausteinen die erste Vorbedingung für ein stabiles ABX_3-Perowskit. Dies wiederum erfordert, daß das B-Kation die Oktaeder-Koordination bevorzugt und daß beim B-Kation eine effektive Ladung existiert. Da ein jedes A-Kation die relativ große Anionen-Lücke besetzen muß, die zwischen Oktaedern mit gemeinsamen Ecken entsteht, ist die passende Größe des A-Kations die zweite Vorbedingung. Wenn das A-Kation zu groß ist, läßt sich der optimale B-X-Bindungsabstand nicht erreichen, und eine hexagonale Packung von Oktaedern mit gemeinsamen Flächen kann ebenso auftreten. Wenn das A-Kation zu klein ist, ergibt die A-X-Bindung Strukturen mit einer kleineren Anionen-Koordination um das A-Kation. Daher sind ABX_3-Perowskite gewöhnlich unter den Fluoriden und Oxiden zu finden, in denen die B-Kationen Oktaeder-Koordination energetisch bevorzugen. Dagegen erfordern Chloride und Sulfide, die größere Anionen haben, nicht nur die größten A-Kationen, sondern sie bilden, weil sie anionische d-Elektronenbahnen mit der richtigen Energie für eine Bahn-Hybridisierung haben, auch Schichtstrukturen, bei denen die A-Kationen ganz fehlen.

Es gibt viele dem Perowskit verwandte Strukturen, die in diese Tabellen aufgenommen wurden. Zum Beispiel können gemischte Systeme wie $A_{1-x}A'_xBX_3$ und $AB_{1-y}B'_yX_3$ mit dieser Struktur auftreten, weiter A-Kationenlücken □ wie in $□_{1-x}A_xBX_3$ und geordnete Kationen wie in $A_2BB'X_6$. Über Perowskite mit Anionenlücken ist schon häufig berichtet worden, vermutlich sind die Anionenleerstellen ⊕ nicht willkürlich verteilt. In Verbindungen, die Fe^{3+}-Ionen enthalten, scheinen sie z. B. paarweise im Oktaeder eines einzelnen B-Platzes zusammenzutreffen und die

*) This work was sponsored by the U. S. Air Force.



John B. Goodenough， 2019 Nobel Prize

Group III Condensed Matter
Volume 4
Magnetic and Other Properties of Oxides and Related Compounds'

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SPRINGERMATERIALS & LANDOLT-BÖRNSTEIN: 威名显赫的用户

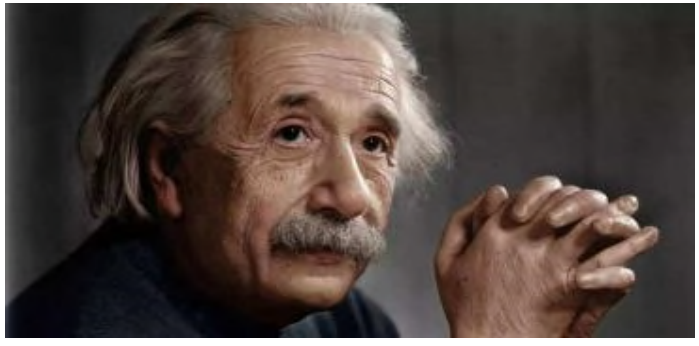
ANNALEN
DER
PHYSIK.

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

In zwei früheren Arbeiten[1]) 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.

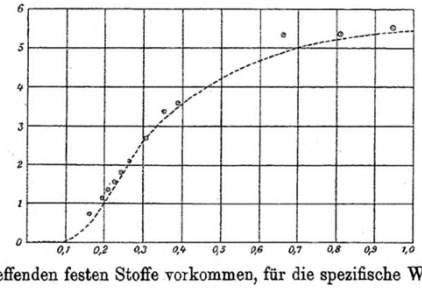
(Eingegangen 9. November 1906.)



Wir entnehmen ferner den Tabellen von Landolt und Börnstein einige Angaben über ultrarote Eigenschwingungen (metallische Reflexion, Reststrahlen) einiger durchsichtiger fester Körper; die beobachteten λ sind in nachstehender Tabelle unter „$\lambda_{beob.}$“ angegeben; die Zahlen unter „$\lambda_{ber.}$“ sind obiger Tabelle entnommen, soweit sie sich auf Atome von abnorm kleiner spezifischer Wärme beziehen; für die übrigen soll $\lambda > 48\,\mu$ sein.

Körper	$\lambda_{beob.}$	$\lambda_{ber.}$
CaFl	24; 31,6	33; > 48
NaCl	5	
KCl	6	
$CaCO_3$	6,7; 1	
SiO_2	8,5; 9	

190 *A. Einstein. Plancksche Theorie der Strahlung etc.*



betreffenden festen Stoffe vorkommen, für die spezifische Wärme pro Grammäquivalent den Ausdruck[1])

$$c = 5{,}94 \sum \frac{e^{\frac{\beta\nu}{T}} \left(\frac{\beta\nu}{T}\right)^2}{\left(e^{\frac{\beta\nu}{T}} - 1\right)^2}. \qquad (8a)$$

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SpringerMaterials数据库内容一览

子数据库&数据合集	内容	针对学科及研究领域
无机固相数据库	300,000+ 晶体结构 39,000+ 相图 150,000+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(如钻探、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	271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	34,684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
材料科学经典系列丛书	504卷Landolt-Börnstein丛书， 23卷SpringerMaterials基础知识手册， 4卷Springer手册	详见下一页

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- 有机 & 无机化合物
- 高分子材料
- 半导体 & 电子材料

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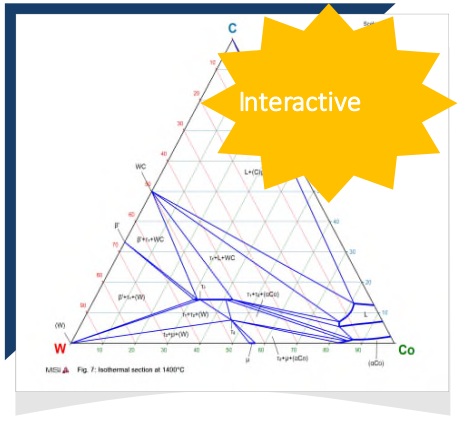
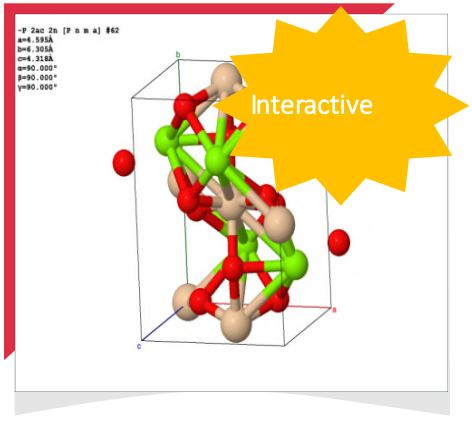
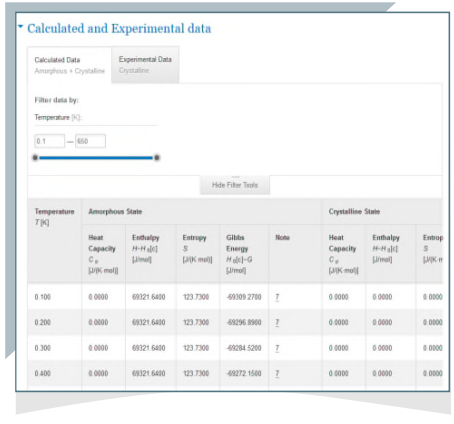
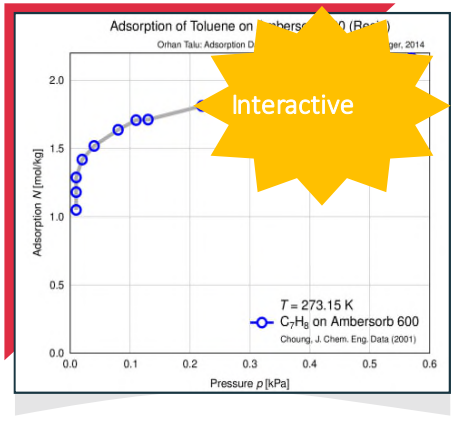
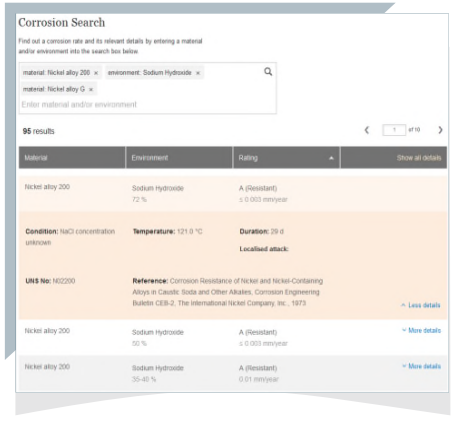
数据类型：相图， 晶体结构，数据表格，材料性质文档，曲线图

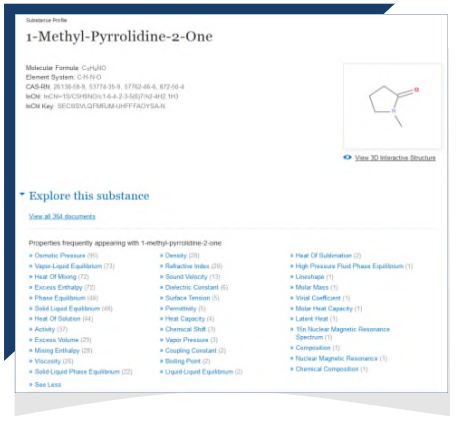


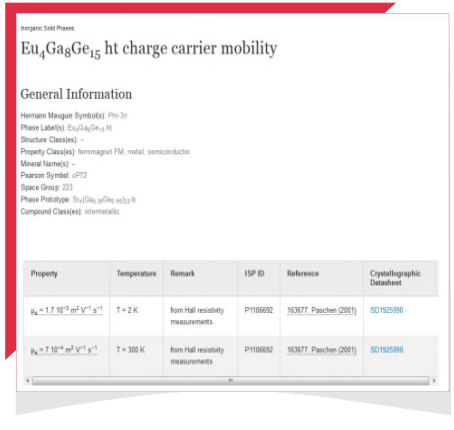


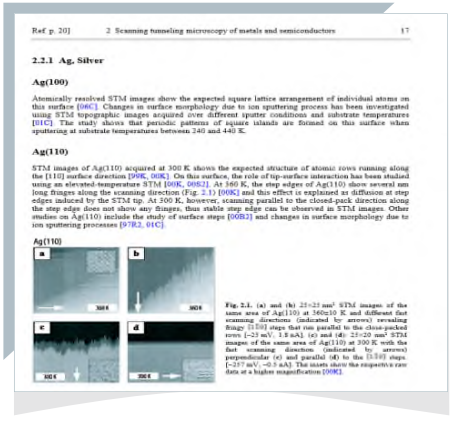












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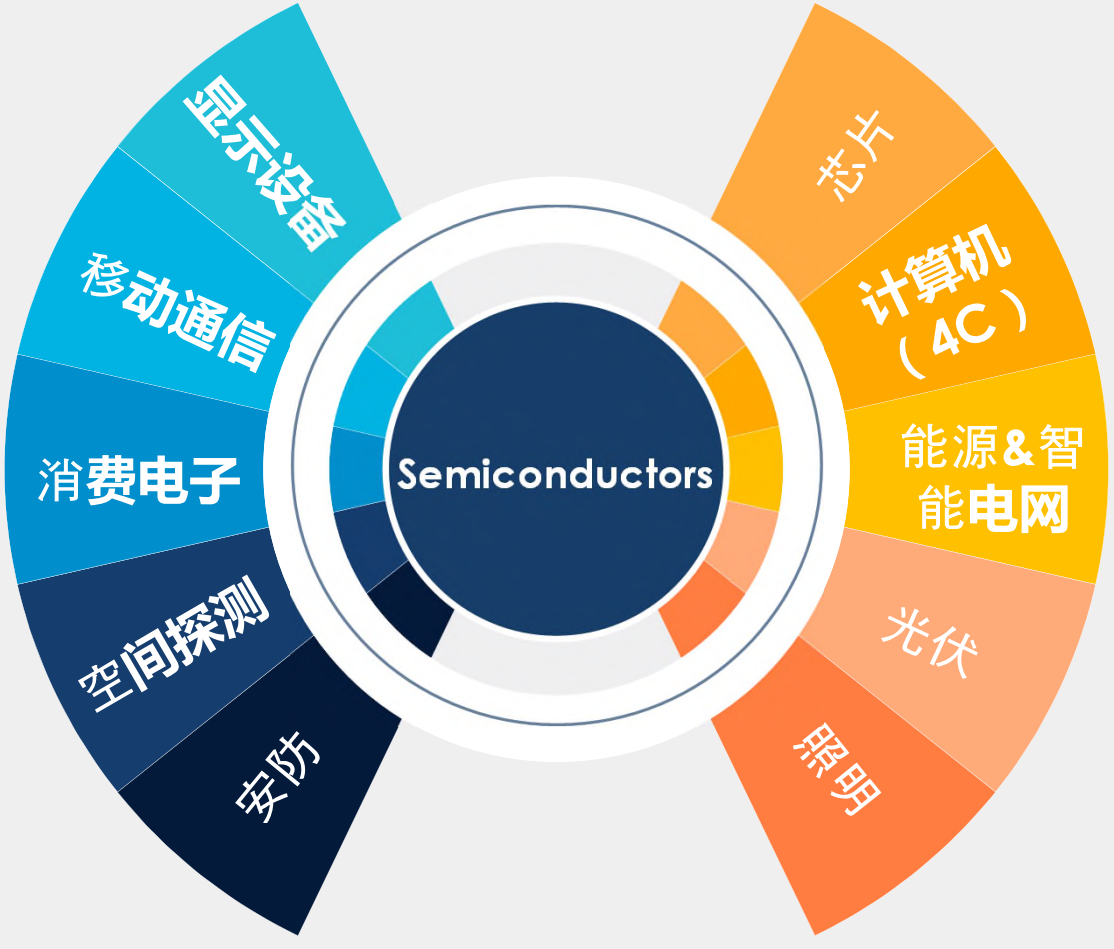

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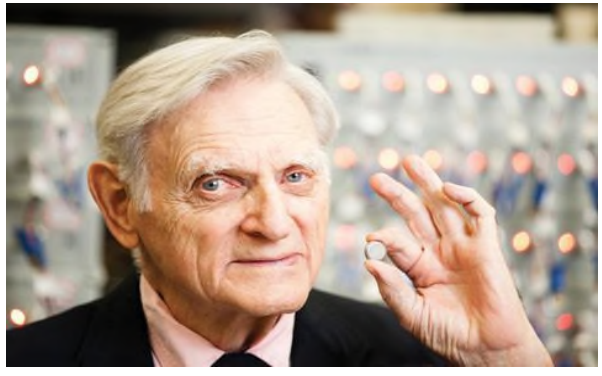

Prof. John B. Goodenough,
Nobel Prize Winner 2019
U Texas @ Austin

Prof. Junhao Chu
中国科学院院士

Prof. Ulrich Rössler
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