

ScienceDirect Online (SDOL)

2006. 5

使用指南

何淑琴（培训经理）

爱思唯尔出版集团北京代表处

SCIENCE  DIRECT®
Springboard to New Knowledge



培训目的

- 核心产品ScienceDirect全文数据库的内容
- 学习如何通过ScienceDirect查找信息
 - 检索功能
 - 浏览功能
- 了解ScienceDirect的个性化服务功能
 - 个性化期刊目录
 - Email提示服务
- 熟悉ScienceDirect相关的支持服务和作者服务



ELSEVIER – 旗下产品

Elsevier是Reed Elsevier集团中的科学部,全球最大的科学文献出版发行商.



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Pergamon



North-Holland

- Elsevier公司每年出版2000多种期刊, 2200多种图书
- Elsevier公司提供丰富的数据库产品
 - ScienceDirect: 全学科的全文数据库
 - Scopus: 迄今最大的二次文献数据库
 - CrossFire: 最重要的化学事实库之一
 - EMBASE.com: 主要的生物医学与药理学文摘型数据库
 - Ei: 应用最广泛的工程类文摘型数据库
 - Geobase
 - Oceanbase



ELSEVIER

SD 简介 - 科研人员获取科技医学信息的重要途径

- **内容:**
 - 在一个整合的平台上尽享海量学术内容
集世界领先的经同行评审的全文科技和医学信息之大成 (25%)
期刊数量超过2000种, 全文700多万篇
包括 The Lancet, Cell, Tetrahedron Letters等著名期刊
参考书、图书系列和手册以及摘要数据库
- **功能:**
 - 检索和浏览相结合; 检索结果可按相关性或出版日期排列, 全文可用HTML或PDF格式显示; 有检索历史功能
 - 个性化服务
 - 使用报告及管理工具
 - 开放的链接技术, 便捷的数据传输 – IP控制, 无并发用户限制
- **形式:**
 - Science Direct Online (SDOL) - 国外主站点, 提供个性化服务
 - Science Direct Onsite (SDOS) - 国内镜像站, 无国际流量费



ELSEVIER

Elsevier 期刊覆盖的学科领域

- 农业和生物学 (120)
- 人文和艺术 (47)
- 生物化学、遗传学和分子生物学 (215)
- 商业、管理和会计学 (77)
- 化学工程学 (71)
- 化学 (94)
- 计算机科学 (115)
- 决策科学 (44)
- 地球科学 (92)
- 经济学、计量经济学和金融 (76)
- 能源和动力 (42)
- 工程与技术 (175)
- 环境科学 (78)
- 免疫学和微生物学 (80)
- 材料科学 (108)
- 数学 (89)
- 医学 (534)
- 神经科学 (102)
- 护理与卫生 (91)
- 药理学、毒理学和制药学 (78)
- 物理学和天文学 (98)
- 心理学 (103)
- 社会科学 (161)
- 兽医学 (36)



期刊品质

- 9 out of the Top 15 [Analytical Chemistry](#) titles
- 9 out of the Top 10 [Chemical Engineering](#) titles
- 7 out of the Top 10 [Electrochemistry](#) titles
- 4 out of the Top 5 [Inorganic Chemistry](#) titles
- 2 of the Top 3 most cited [Organic Chemistry](#) titles
- 8 out of the Top 20 [Physical Chemistry](#) titles
- 8 out of the Top 20 [Spectroscopy](#) titles



化学工程类期刊

排行	期刊	影响因子2003	影响因子2004
1	Journal of Catalysis	3.276	4.063
2	Catalysis Today	2.627	3.108
3	Journal of Supercritical Fluids	1.97	2.275
4	Journal of Membrane Science	2.081	2.108
5	AIChE Journal	1.667	1.761
6	Computers & Chemical Engineering	1.251	1.678
7	Chemical Engineering Science	1.562	1.655
8	Biochemical Engineering Journal	1.221	1.617
9	Dyes & Pigments	1.063	1.61
10	Reactive & Functional Polymers	1.417	1.582

2004年该领域内引用量最高的期刊

1 Journal of Catalysis 22, 368

2 Chemical Engineering Science 14, 376



ScienceDirect 中国集团



- 2000年 11所高等院校和研究机构加入集团采购
在清华大学, 上海交通大学建立镜像站点
- 2001年 17所高等院校加入SDOS集团
- 2002年 28所高等院校和研究机构加入SDOS集团
- 2003年 35所高校及中科院所有院所
- 2004年 超过110所高校及70个中科院所
- 2005年 超过130所高校及70个中科院所



全文数据库

- 囊括了ELSEVIER及旗下品牌出版的2000多种期刊
 - **SCI收录1375，EI收录522**
- 获取超过七百万篇学术全文及六千万条摘要，包括在编文章
- **Science Direct** 得到70多个国家认可，
中国高校每月下载量高达250万篇
- 目前回溯到1995年的数据
- 回溯至创刊号
最早的期刊 **LANCET 1823**
回溯年限 **1823-1994（171年）**



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内 容



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ScienceDirect 内容

The screenshot displays the ScienceDirect website interface. At the top, there is a navigation bar with tabs for Home, Search, Journals, Books, Abstract Databases, My Profile, and Alerts. The 'Journals' and 'Books' tabs are circled in orange. Below the navigation bar is a search bar with a 'Go' button and a 'Search Tips' link. The main content area is divided into several sections: 'ScienceDirect Info' with links for About ScienceDirect, Content Coverage, Librarian Services, Guest User Info, and About Athens; 'Over 1800 titles online...' with a search box and 'Browse A-Z' link; and 'Subject Areas in ScienceDirect' with a list of disciplines including Agricultural and Biological Sciences, Arts and Humanities, Biochemistry, Genetics and Molecular Biology, Business, Management and Accounting, Chemical Engineering, Chemistry, Computer Science, Decision Sciences, Earth and Planetary Sciences, Economics, Econometrics and Finance, Energy, Engineering, Environmental Science, Immunology and Microbiology, Materials Science, Mathematics, Medicine and Dentistry, Neuroscience, and Nursing and Health Professions. There are also promotional banners for 'TOP25 Hottest Articles', 'interactive tutorials', and 'SD@Connect Product News Letter'.

Science Direct 全文数据库

- Science Direct 的内容
 - Elsevier 及旗下品牌的期刊
 - Cell Press
 - 回溯文档
 - 学科选择
 - 常用参考书
 - 系列丛书
 - 手册
 - 摘要数据库



期刊

- 包括超过2000种期刊
 - Elsevier Science,
 - Pergamon,
 - North Holland etc...
 - Academic Press
 - Harcourt Health Sciences
 - Cell Press
 - etc
- 超过700万篇学术全文
 - 24 个学科领域
 - “在编文章” (Articles In Press)
 - 回溯文档, 可回溯到第一卷第一期



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回溯期刊(Backfile)

- 生物化学、遗传学和分子生物学
- 商业、管理及财会
- 计算机科学
- 决策学
- 经济学、经济计量学与金融
- 工程学与技术.....

共有29个回溯文档集, 在SD上可检索到1995年以前的
400多万篇全文



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SD上的回溯文档

Tetrahedron
Copyright © 2004 Elsevier Ltd. All rights reserved.
Volume 1, Issues 1-2, Pages 1-175 (1957)



display checked docs | e-mail articles | export citations View: Citations Go

- Foreword** • EDITORIAL
Page 1
[Abstract](#) | [Abstract + References](#) | [PDF \(66 K\)](#)
- Alicyclic studies—X: The bicyclo-(5:4:0)-2-undecanones** • ARTICLE
Pages 3-8
David Ginsburg and Walter J. Rosenfelder
[Abstract](#) | [Abstract + References](#) | [PDF \(455 K\)](#)
- Alicyclic studies—XI: Attempted syntheses of 5:6-benzazulene and benzheptalenes** • ARTICLE
Pages 9-18
Yaacov Amiel and David Ginsburg
[Abstract](#) | [Abstract + References](#) | [PDF \(829 K\)](#)
- Alicyclic studies—XII: An alicyclic synthesis of 2:3,6:7-dibenzotropone** • ARTICLE
Pages 19-21
Yaacov Amiel and David Ginsburg
[Abstract](#) | [Abstract + References](#) | [PDF \(241 K\)](#)



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常用参考书 (Major Reference Works)

ScienceDirect上的参考书涵盖以下学科共47种:

提供了某个学术领域的综合评述, 无论是某个领域内专家的研究成果, 还是信息全面详尽的多卷百科全书均有涉及。

- Comprehensive Clinical Psychology (综合临床心理学)
- Comprehensive Composite Materials (综合合成材料学)
- Comprehensive Structural Integrity (综合结构整体性)
- Encyclopedia of Atmospheric Sciences (大气科学百科全书)
- Encyclopedia of Cancer, 2nd Edition (癌症百科全书)
- Encyclopedia of Genetics (遗传学百科全书)
- Encyclopedia of Hormones (荷尔蒙百科全书)
- ...

详情请访问:

http://info.sciencedirect.com/content/books/ref_works/

SD上的参考书

Home Search Journals Books Abstract Databases My Profile Alerts

Quick Search: [input] within All Reference Works Go Search Tips

All Books Book Series Handbooks Reference Works

Select All Reference Works, Favorites or a Subject [input] Browse Reference Works a Journal or Book Title: [input] Go

Display: [input] Apply

= subscribed = non-subscribed

* Click on the icon next to the title to check your entitlements.

- Comprehensive Clinical Psychology:** *Editors-in-Chief:* Alan S. Bellack and Michel Hersen
The first online edition of the highly acclaimed 11-volume resource *Comprehensive Clinical Psychology*. CCP covers everything from the history of the field to current thinking about training, professional standards and practices, and socio-cultural factors in mental health and illness.
[Search](#) | [Table of Contents](#) | [Subject Index](#)
- Comprehensive Composite Materials:** *Editors-in-Chief:* Anthony Kelly and Carl Zweben
A comprehensive reference for scientists and technologists that covers key aspects of naturally occurring and synthetic composite materials. This work covers all classes of composite materials as well as smart materials as they relate to composites, including process monitoring, embedded sensors and actuators, and damage detection.
[Search](#) | [General Information](#) | [Table of Contents](#) | [Authors](#) | [Subject Index](#)
- Comprehensive Coordination Chemistry II:** *Editors-in-Chief:* J. A. McCleverty and T. J. Meyer
The second edition of the original classic from 1987, surveying developments since 1980 authoritatively with a greater emphasis on trends in interdisciplinary areas such as biology and materials science. This edition is enhanced by links to PDFs of chapters from the original 1987 publication.
[Search](#) | [General Information](#) | [Table of Contents](#) | [Authors](#) | [Subject Index](#)
- Comprehensive Structural Integrity:** *Editors-in-Chief:* I. Milne, R. O. Ritchie, and B. Karihaloo
The first reference work of its kind in this field, this publication provides a first point-of-entry tool for users in this area. Special emphasis is given to the coverage of the interaction between mechanics and materials and structural integrity applications.
[Search](#) | [General Information](#) | [Table of Contents](#) | [Authors](#) | [Subject Index](#)

ELSEVIER

即将推出的参考书

2006年

- Encyclopedia of Language and Linguistics
- Encyclopedia of Respiratory Medicine
- Encyclopedia of Mathematical Physics
- Encyclopedia of Gerontology
- Encyclopedia of Stress
- Comprehensive Medicinal Science
- Comprehensive Organometallic Chemistry
- Encyclopedia of Archeology
- Encyclopedia of Quaternary Science
- Evolution of the Nervous System



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图书系列 (Book Series)

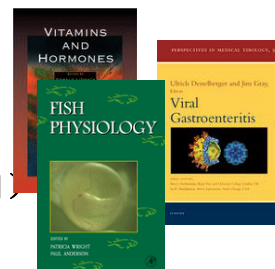
- 收录某一专业领域或专题综述里的反映最新研究成果高质量的评述和文章
- 定期出版，通常至少一年一次
- 在内容和结构上与期刊类似
- 被引用的频率高，单篇文章使用量可观



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图书系列涵盖的学科领域

- 化学 (12)
- 商业、管理和经济学 (54)
- 生命科学 (33)
- 酶学方法 (1)
- 酶学方法的回溯书籍[1955-1999年] (1)
- 心理学 (22)
- 社会科学 (41)



例: *Methods in Enzymology*, *Progress in Brain Research*,
Advances in Immunology and *Research in Organizational Behavior*



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SD上的图书系列

SCIENCE @ DIRECT

Register or Login: user name Password: Go Athens Login InCommon Login

Home Search Journals Books Abstract Databases My Profile Alerts Help

Quick Search: within All Book Series Go Search Tips

All Books Book Series Handbooks Reference Works

Select All Book Series, Favorites, or a Subject Browse Reference Works

All Book Series

Sort By: Display: Title Subscribed and Non-subscribed Apply

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 | all

Click on the icon next to the title to check your entitlements.

Advances in Accounting
Advances in Accounting Behavioral Research
Advances in Agricultural Economic History
Advances in Agronomy
Advances in Applied Microbiology
Advances in Applied Microeconomics
Advances in Appreciative Inquiry
Advances in Austrian Economics
Advances in Bioethics
Advances in Botanical Research
Advances in Business Marketing and Purchasing
Advances in Cancer Research
Advances in Carbohydrate Chemistry and Biochemistry
Advances in Catalysis
Advances in Cell Aging and Gerontology

ELSEVIER

手册 (Handbook)

手册是针对某一学科领域的全面而权威的评述

- 对某学科的全面的概览
- 为特邀作者所著
- 内容质量高，引用率高
- 使用周期长



手册 (Handbook)

ScienceDirect上的手册涵盖以下4个学科共7种:

■ 经济学

Handbooks in Operations Research and Management Sciences (11卷)

Handbooks in Economics Series (57卷)

■ 数学

Handbook of Statistics (23卷)

Handbook of Numerical Analysis (12卷)

■ 物理学

Handbook on the Physics and Chemistry of Rare Earths (34卷)

Handbook on Magnetic Materials (15卷)

■ 化学

Comprehensive Analytical Chemistry (15卷)



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内容整合

The screenshot shows the ScienceDirect search interface. At the top, there is a navigation bar with 'Home', 'Search', 'Journals', 'Books', 'Abstract Databases', 'My Profile', and 'Alerts'. The 'Search' tab is selected. Below the navigation bar, there is a search input field and a dropdown menu for 'All Full-text Sources'. The main search area is divided into 'All Sources' and 'Scirus' tabs, both of which are circled in red. The 'All Sources' tab is active, showing search options for 'Term(s)', 'AND', 'Sources', 'Subject', and 'Dates'. The 'Subject' dropdown menu is open, showing a list of subjects including 'All Sciences -', 'Agricultural and Biological Sciences', 'Arts and Humanities', and 'Biochemistry, Genetics and Molecular Biology'. A red box with the text '整合检索' (Integrated Search) is overlaid on the right side of the search area. The Elsevier logo is visible in the bottom right corner.



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链接至 Scopus



The screenshot shows a ScienceDirect article page. The article title is "Enhancement of the catalytic hydrodechlorination of tetrachloroethylene in methanol at mild conditions by water addition". The authors listed are Neil C. Concbido, Tetsuji Okuda, Yoichi Nakano, Wataru Nishijima, and Mitsumasa Okada. The article is from Tetrahedron Letters, Volume 46, Issue 21, 23 May 2005, Pages 3613-3617. The DOI is 10.1016/j.tetlet.2005.03.178. The abstract states: "The dechlorination of tetrachloroethylene (PCE) over carbon-supported palladium catalyst (Pd/C)". On the right side of the page, there is a section titled "External Links" with a red circle around the link "Abstract + References in Scopus".

检索



检索语言

AND	同时出现在文章中 例: lesion AND pancreatic (胰腺损伤)
OR	其中一个出现在文章中 例: kidney OR renal (肾)
AND NOT	后面所跟的词不出现在文章中 例: tumor AND NOT malignant
*	取代一个单词中的一个字母 wom*n would find "woman" and "women " 例: transplant** would find "transplanted, transplator" not find "transplanting"
词组查询	remote education "remote education"
!	通配符 任意字母后缀 behav! would find "behave," "behaviour," "behavioural"
W/nn PRE/nn	两词相隔不超过N词, 词序不定 例: pain W/15 morphine 两词相隔不超过N词, 词序一定 behavioural PRE/3 disturbances
()	定义检测词顺序 例: (remote OR satellite) AND education
作者	先输入名的全称或缩写, 然后输入姓 r smith ; jianhua zhang



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检索技巧

- 选择与检索主题密切相关的检索词;
 - 包含jargon; 如: kidney disease OR renal failure;
 - 包括同义词和缩写形式; 如: mri OR magnetic resonance imaging;
 - 避免使用过于宽泛的词汇: 如: influence;
- 使用单词的单数形式;
 - 使用单数单词将可以检索到大多数单词单数、复数和所有格如: city---city,cities,city's,cities'
 - 一般这一规则对不规则单词可能不适用;
- 优先顺序 OR AND AND NOT
 - 例: genes OR chromosomes W/5 splicing OR cloning
(genes OR chromosomes W/5 splicing) OR cloning
- 高级检索模式 field_name (search_term)
- 运用临近符进行作者检索
 - 例: raymond W/3 smith 可检索到Raymond Smith, Raymond J. Smith



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主页

The screenshot shows the ScienceDirect homepage. At the top, there is a navigation bar with links for Home, Search, Journals, Books, Abstract Databases, My Profile, and Alerts. Below this is a search bar with a 'Quick Search' field and a 'Go' button. The main content area is divided into several sections: 'ScienceDirect Info' with links like 'About ScienceDirect', 'Content Coverage', and 'Librarian Services'; 'Over 1800 titles online...' with a 'Search for a Title' field; 'Subject Areas in ScienceDirect' with a list of disciplines; 'Top Publications in ScienceDirect' featuring 'The Lancet', 'Progress in Neurobiology', and 'Pharmacology & Therapeutics'; and 'Hot Topics' with a link to 'Accountants Are Boring Because Of The'. The Elsevier logo is visible in the bottom right corner.

检索页面（基本检索）

The screenshot shows the ScienceDirect search page. The search bar contains the text 'land subsidence'. Below the search bar, there are several options for search criteria: 'Term(s)', 'Sources', 'Subject', and 'Dates'. The 'Sources' section has checkboxes for 'Journals', 'Book Series', 'Handbooks', and 'Reference Works'. The 'Subject' section has a dropdown menu with 'All Sciences -' selected. The 'Dates' section has a dropdown menu with '1995' selected. The search results are displayed in a table with columns for 'Abstract', 'Title', 'Keywords', 'Authors', 'Journal Name/Book Title', 'Title', 'Keywords', 'Abstract', 'References', 'ISSN', 'Affiliation', and 'Full Text'. The 'Search' button is circled in red. Annotations in Chinese point to the search bar ('输入关键词'), the search criteria dropdowns ('选择查询字段'), and the subject dropdown ('选择学科和时间段').

高级检索



The screenshot shows the ScienceDirect Advanced Search page. At the top, there is a navigation bar with 'Home', 'Search', 'Journals', 'Books', 'Abstract Databases', 'My Profile', and 'Alerts'. Below this is a 'Quick Search' field. The main search area is titled 'All Sources' and includes a 'Term(s)' input field with a dropdown arrow. A red callout box points to this field with the text '布尔语言检索'. Below the search term field are checkboxes for 'Sources' (Journals, Book Series, Handbooks, Reference Works, Abstract Databases) and a 'Subject' dropdown menu. At the bottom of the search area are 'Search', 'Clear', and 'Recall Search' buttons. The Elsevier logo is visible in the bottom right corner.

检索结果显示



The screenshot shows the ScienceDirect search results page. At the top, there is a navigation bar with 'Home', 'Search', 'Journals', 'Books', 'Abstract Databases', 'My Profile', and 'Alerts'. Below this is a 'Quick Search' field. The main content area is titled '3 Articles Found' and includes a search query: 'pub-date > 1994 and Title-Abstr-Key (case study)AND Abstract("land subsidence")'. A red callout box points to the search query with the text '编辑, 保存检索, 设置EMAIL提示'. Below the search query are buttons for 'Edit Search', 'Save Search', and 'Save as Search Alert'. The 'Article List' tab is selected, and there are buttons for 'display checked docs', 'e-mail articles', and 'export citations'. A red callout box points to these buttons with the text 'Email文章, 输出引文'. The search results are listed in a numbered format, including article titles, authors, and publication details. The Elsevier logo is visible in the bottom right corner.

Email/输出引文

E-mail Articles

(* = required field)

Export Citations

Send the following citations + links in an e-mail:

- All 3 documents
 Checked documents: 1-3 Ex

Sender's Name:

Sender's E-mail:

Recipient's E-mail:

(please use commas between names)

Subject:

Add this note:

Send E-mail in: Formatted (HTML) Plain text (ASCII)

Export the following to a citation management program:

- All 3 documents
 Only these documents: 1-3 Example: 3, 6-8

Export:

File Format:



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检索结果显示 (续)

10. **Drivers of accident preparedness and safety: evidence from the RMP Rule** • ARTICLE
Journal of Hazardous Materials, Volume 115, Issues 1-3, 11 November 2004, Pages 9-16
Paul R. Kleindorfer, Michael R. Elliott, Yanlin Wang and Robert A. Lowe
[SummaryPlus](#) | [Full Text + Links](#) | [PDF \(106 K\)](#)
11. **The new risk paradigm for chemical process security and safety** • ARTICLE
Journal of Hazardous Materials, Volume 115, Issues 1-3, 11 November 2004, Pages 175-180
David A. Moore
[SummaryPlus](#) | [Full Text + Links](#) | [PDF \(246 K\)](#)
12. **Evaluating and assessing process hazard analyses** • ARTICLE
Journal of Hazardous Materials, Volume 115, Issues 1-3, 11 November 2004, Pages 181-192
P. John Palmer
[SummaryPlus](#) | [Full Text + Links](#) | [PDF \(416 K\)](#)
13. **Drug use, risk and urban order: examining supervised injection sites (SISs) as 'governmentality'** • ARTICLE
International Journal of Drug Policy, In Press, Corrected Proof, Available online 2 November 2004,
Benedikt Fischer, Sarah Turnbull, Blake Poland and Emma Haydon
[SummaryPlus](#) | [Full Text + Links](#) | [PDF \(134 K\)](#)
14. **Managing seen and unseen blood associated with drug injecting: implications for theorising harm reduction for viral risk** • ARTICLE
International Journal of Drug Policy, In Press, Corrected Proof, Available online 2 November 2004,
Mark Davis and Tim Rhodes
[SummaryPlus](#) | [Full Text + Links](#) | [PDF \(102 K\)](#)

在编文章



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检索结果显示: 文摘 + 引文

3 Articles Found
pub-date > 1994 and Title-Abstr-Key (case study)AND Abstract("land subsidence")

[Edit Search](#) | [Save Search](#) | [Save as Search Alert](#)

Article List | **Partial Abstracts** | Full Abstracts

display checked docs | e-mail articles | export citations

Sort By: Date

1. **Three dimensions of sustainability of farming practices in the North China Plain: A case study from Ningjin County of Shandong Province, PR China** • ARTICLE
Agriculture, Ecosystems & Environment, Volume 105, Issue 3, February 2005, Pages 507-522
Lin Zhen, Jayant K. Routray, Michael A. Zoebisch, Guibao Chen, Gaodi Xie and Shengkui Cheng
[SummaryPlus](#) | [Full Text + Links](#) | [PDF \(217 K\)](#)

The current pressure on production resources of the People's Republic of China, such as land and water to feed the growing population, necessitates the assessment of farming practices. This is particularly critical in the North China Plain, which is the food bowl of the country. This study assesses the economic, environmental and socio-institutional aspects of the major cropping systems in the NCP, based on selected site-specific indicators and their established threshold limits. Necessary information for this study was obtained through a survey of 270 farm households from four ...

2. **Development of engineering geology in western United States** • ARTICLE
Engineering Geology, Volume 59, Issues 1-2, January 2001, Pages 1-49
George A. Kiersch
[SummaryPlus](#) | [Full Text + Links](#) | [PDF \(1035 K\)](#)

Geologic concepts and scientific-technical guidance for the planning-design and construction of engineered works was recognized in Europe by the 1800s and by the early 1900s in North America. This early geologic knowledge and experience provided the rudimentary principles that guided practitioners of the 19th century in serving the emerging projects in western United States. **Case studies** review the scientific-technical lessons learned and the legacy of geologic principles established in the planning and construction of major civil, mining, and military engineered works in the western ...

ELSEVIER

文章显示: 综合信息(Summary Plus)

Home | Search | Journals | Books | Abstract Databases | My Profile | Alerts

Quick Search: within All Full-text Sources [Search Tips](#)

Engineering Geology
Volume 59, Issues 1-2, January 2001, Pages 1-49

doi:10.1016/S0013-7952(00)0063-6 [Cite or Link Using DOI](#)
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Development of engineering geology in western United States

George A. Kiersch

^a Professor Emeritus, Cornell University, Ithaca, NY 14853, USA
^b Kiersch Associates, GeoScience Consultants, 4750 Camino Luz, AZ 85718, USA

Available online 2 February 2001.

Abstract

Geologic concepts and scientific-technical guidance for the planning-design and construction of engineered works was recognized in Europe by the 1800s and by the early 1900s in North America. This early geologic knowledge and experience provided the rudimentary principles that guided practitioners of the 19th century in serving the emerging projects in western United States. **Case studies** review the scientific-technical lessons learned and the legacy of geologic principles established in the planning and construction of major civil, mining, and military engineered works in the western states. These contributions to GeoScience knowledge and engineering geology practice

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Fig. 1. Boulder (Hoover) Dam site under construction each abutment, and blasting for the keyway of the dam Heinrich Ries collection, Cornell University).



Fig. 2. The San Andreas fault zone, strike-slip movement cited by Reid (1911) in his concept of elastic rebound University, in Kiersch, 1991, p. 33).

Table 2. Experiments on soil water management for summer maize of 1996

Number	Treatment	Precipitation (mm)	Irrigation (mm)	Average production (kg/ha)
96E ₁	straw mulch (4500 kg/ha) with deep furrows	429.6	0	7507
96E ₂	deep furrows with no mulch	429.6	0	6750
96E ₃	no furrows with straw mulch (4500 kg/ha)	429.6	0	7025
96E ₄	no furrows and no mulch	429.6	0	6200

References

Belmann, C., Wesseling, J.G. and Feddes, R.A., 1983. Simulation model of the water balance of a cropped soil. *SWATRE J. Hydrol.* 63, pp. 271 - 286. [Abstract](#) | [Abstract + References](#) | [PDF \(763 K\)](#) | [Abstract + References in Scopus](#) | [Cited By in Scopus](#)

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Development of engineering geology in western United States
George A. Kiersch^{a,b}
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Available online 2 February 2001.

Abstract
Geologic concepts and scientific-technical guidance for the planning, design and construction of engineered works was recognized in Europe by the 1800s and by the early 1900s in North America. This early geologic knowledge and experience provided the rudimentary principles that guided practitioners of the 19th century in serving the emerging projects in western United States. **Case studies** review the scientific-technical lessons learned and the legacy of geologic principles established in the planning and construction of major civil, mining, and military engineered works in the western states. These contributions to GeoScience knowledge and engineering geology practice

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