Overview and User Guide

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Provide comprehensive resources for research and communications in the Earth Sciences

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Support the sustainability of societies and libraries and respond to the needs to authors and researchers

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Journal Collection of **46** preeminent society journals with more than **165,000** articles from **28** publishers.

- New content in 2018 represented a 6% increase to total journal content on the GSW platform.

eBook Collection includes over **2,170+ ebook titles** from **11 publishers**

- Now including GSA's Special Papers and Memoirs Series

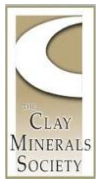
AGI GeoRef database of more than **4.1 million records** integrated in search and providing a discovery data layer for articles and books

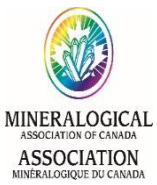
GSW Journals – Impact factors

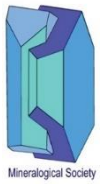
The overwhelming majority (89%) of the journals in the Millennium Collection are ranked in Thomson Reuters Web of Science™. The average impact factor of our ranked journals (2017) is 2.24, a 12% increase over last year and a 27% increase over the past five years.

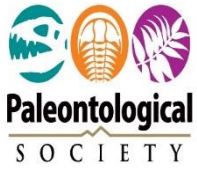
Top 8 Journals	2017 IF
AAPG Bulletin	3.208
Economic Geology	3.295
Elements	4.329
Geochemical Perspectives	4
Geochemical Perspectives	5.073
Geological Society of America Bulletin	4.038
Reviews in Mineralogy & Geochemistry	8.846
Seismological Research Letters	3.734

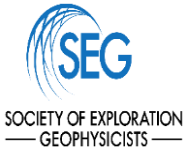
Participating Publishers











Innovative Site Features

Split screen display — allows users to scroll the journal article and the article figures simultaneously

Faceted searching — added facets for journal, journal section, article type, book series and GeoRef keywords

Integrated map view search results — allows users to limit search by geographic location

Figure abstract view in search results — thumbnails display with results so users can scan for relevant content

Re-conceptualized treatment of GeoRef Thesaurus — integrates the traditional thesaurus with search results

What's New on the Site

New Archives – *American Mineralogist* full-text back to1916 and *AAPG Bulletin* full-text back to 1917

New OA Journal – Gulf PetroLink's journal ***GeoArabia*** (1996-2015) is in process of migrating to GSW

Citation Manager – providing researchers with bulk citation export from search result or issue pages

Proceeding with **CHORUS compliance** – with funding info, **CLOCKSS** archiving, **ORCID iD** support coming soon

Usability enhancements to the sign in area and journal archive pagers.

Information for Librarians

- **Section 508 and W3C compliant**
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- **Recently partnered with Ebsco Discovery Services and OCLC to make GSW content more accessible and easier to discover**

User Guide

Split Screen Article View

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- Tab structure for supplements, TOC, references, GeoRef content
- PDF view and standard view options also available

Split Screen Article View

RESEARCH ARTICLE | JUNE 01, 2012

Geochemical Evolution of the Banded Iron Formation-Hosted High-Grade Iron Ore System in the Koolyanobbing Greenstone Belt, Western Australia*

Thomas Angerer; Steffen G. Hagemann; Leonid V. Danyushevsky

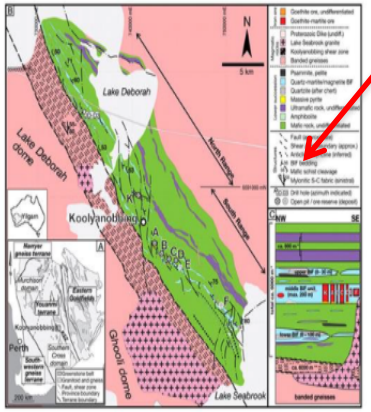
Economic Geology (2012) 107 (4): 599-644.

https://doi.org/10.2113/econgeo.107.4.599 **Article history**

Abstract

The banded iron formation (BIF)-hosted iron ore deposits in the lower greenstone succession of the Koolyanobbing greenstone belt, 50 km north of Southern Cross in Western Australia, are a ~200 Mt high-grade Fe (>58%) pre-mining resource and represents one of the most important iron ore districts in the Yilgarn craton. Four hypogene alteration (ore-forming) stages and one supergene upgrading event took place: (1) During ore stage 1, LREE-depleted, transition metal-enriched, Mg-Fe (±Ca) carbonates replaced quartz in BIFs. The deposit-scale alteration was most likely induced by devolatilization of sea-floor–altered, Ca-Si–depleted mafic rocks in the vicinity of the BIF during early regional (syn-D_1), very low to low-grade metamorphism and was most strongly developed on reactivated BIF-basalt contacts. (2) Ore stage 2 involved the formation of patchy magnetite ore by a syn-D_2 to -D_4 dissolution of early carbonate. Enrichment of Fe_2O_{3total} in magnetite iron ore was by a factor of 2 to 2.4, and compatible trace elements in magnetite, such as Ga, V, and Al, were immobile. A subdeposit-scale ferroan talc-footprint proximal to magnetite iron ore in the largest deposit (K deposit) was associated with ore stage 2 and resulted from dissolution of magnesite due to reaction with silica in the BIF under greenschist facies conditions and potentially high fluid/rock ratio. (3) Magnetite growth, during ore stage 3, forming granular magnetite-martite ore is related to a subsequent hydrothermal event, occurring locally throughout the belt, especially in D_{2b} faults. (4) Ore stage 4 was associated with Fe-Ca-P-(L)REE-Y–enriched hydrothermal fluids, possibly from a magmatic source such as the postmetamorphic Lake Seabrook granite that crops out about 10 km west of the Koolyanobbing deposits and at the southern margin of the greenstone belt. These Ca-enriched fluids interacted with distal metamorphosed mafic rock and influenced the BIF-ore system in a small number of deposits. They were channelled through regional D_4 faults and caused specularite-

Fig. 1



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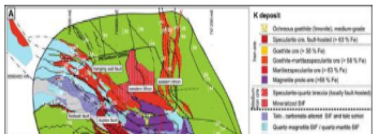
Geologic map of the Koolyanobbing greenstone belt: (A) insert showing the Yilgarn craton (KSZ = Koolyanobbing shear zone), (B) simplified geologic map of the Koolyanobbing greenstone belt, and (C) lithostratigraphic column of the lower greenstone succession (Cassidy et al., 2006) in the Koolyanobbing greenstone belt.

Images scroll separately from text

Fig. 2



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BOOK CHAPTER

Tectonic Processes and Metallogeny along the Tethyan Mountain Ranges of the Middle East and South Asia (Oman, Himalaya, Karakoram, Tibet, Myanmar, Thailand, Malaysia)

By: Michael P. Searle; Laurence J. Robb; Nicholas J. Gardiner;

DOI: https://doi.org/10.5382/SP.19.12

Published: January 01, 2016

Chapter PDF Cite Share Tools

†

Corresponding author: e-mail, mike.searle@earth.ox.ac.uk

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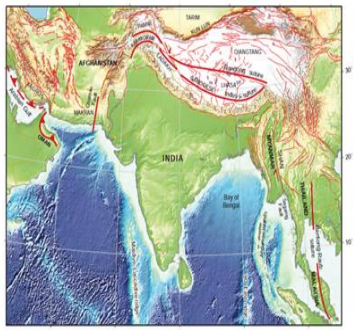
Present address: Centre for Exploration Targeting-Curtin Node, Department of Applied Geology, Western Australian School of Mines, Curtin University, Perth, WA 6102, Australia.

Abstract

The genesis of mineral deposits has been widely linked to specific tectonic settings, but has less frequently been linked to tectonic processes. Understanding processes of oceanic and continental collision tectonics is crucial to understanding key factors leading to the genesis of magmatic-, metamorphic-, hydrothermal-, and sedimentary-related mineral deposits. Geologic studies of most ore deposits typically focus on the final stages of concentration and emplacement. The ultimate source (mantle, lower crust, upper crust) of mineral deposits in many cases remains more cryptic. Uniquely, along the Tethyan collision zones of Asia, every stage of the convergence process can be studied from the initial oceanic settings where ophiolite complexes were formed, through subduction zone and island-arc settings with ultrahigh- to high-pressure metamorphism, to the continental collision settings of the Himalaya, and advanced, long-lived collisional settings such as Afghanistan, the Karakoram Ranges, and the Tibetan plateau. The India-Asia collision closed the intervening Neotethys ocean at ~50 Ma and resulted in the formation of the Himalayan mountain ranges, and increased crustal thickening, metamorphism, deformation, and uplift of the Karakoram-Hindu Kush ranges, Tibetan plateau, and older collision zones across central Asia. Metallogenesis in oceanic crust (hydrothermal Cu-Au; Fe, Mn nodules) and mantle (Cr, Ni, Pt) can be deduced from ophiolite complexes preserved around the Arabia/India-Asia collision (Oman, Ladakh, South Tibet, Myanmar, Andaman Islands). Tectonic-metallogenic processes in island arcs and ancient subduction complexes (VMS Cu-Zn-Pb) can be deduced from studies in the Dras-Kohistan arc (Pakistan) and

Figures & Tables Contents GeoRef References Related

Fig. 1.



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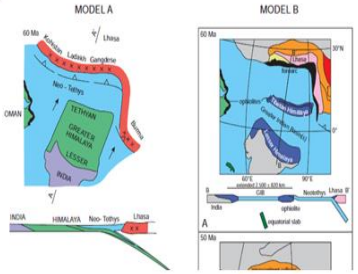
Digital elevation model of the Middle East and Asia, showing the major tectonic features.

Fig. 2.



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- Figure display for scanning content (like a visual abstract)
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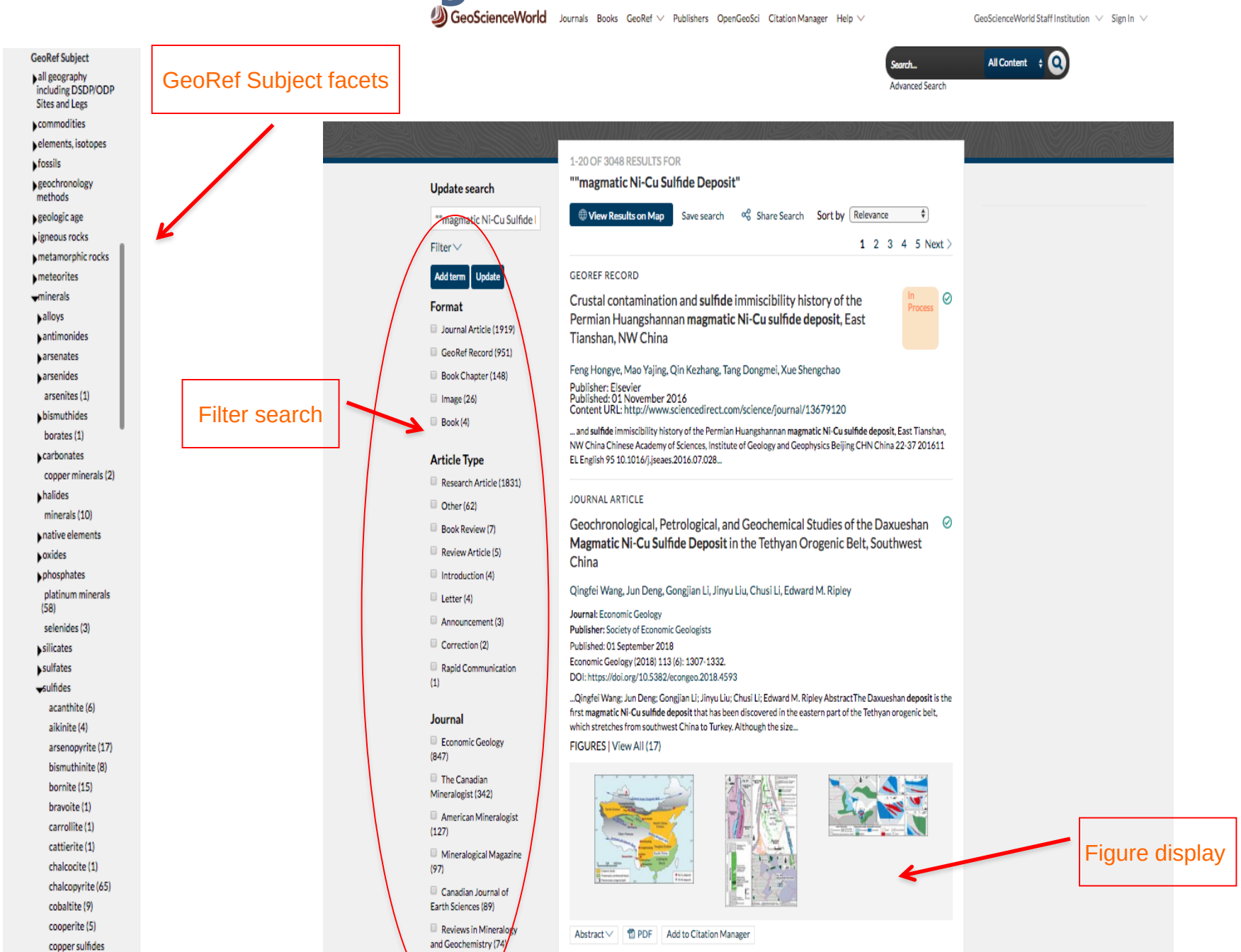
Search Results Page



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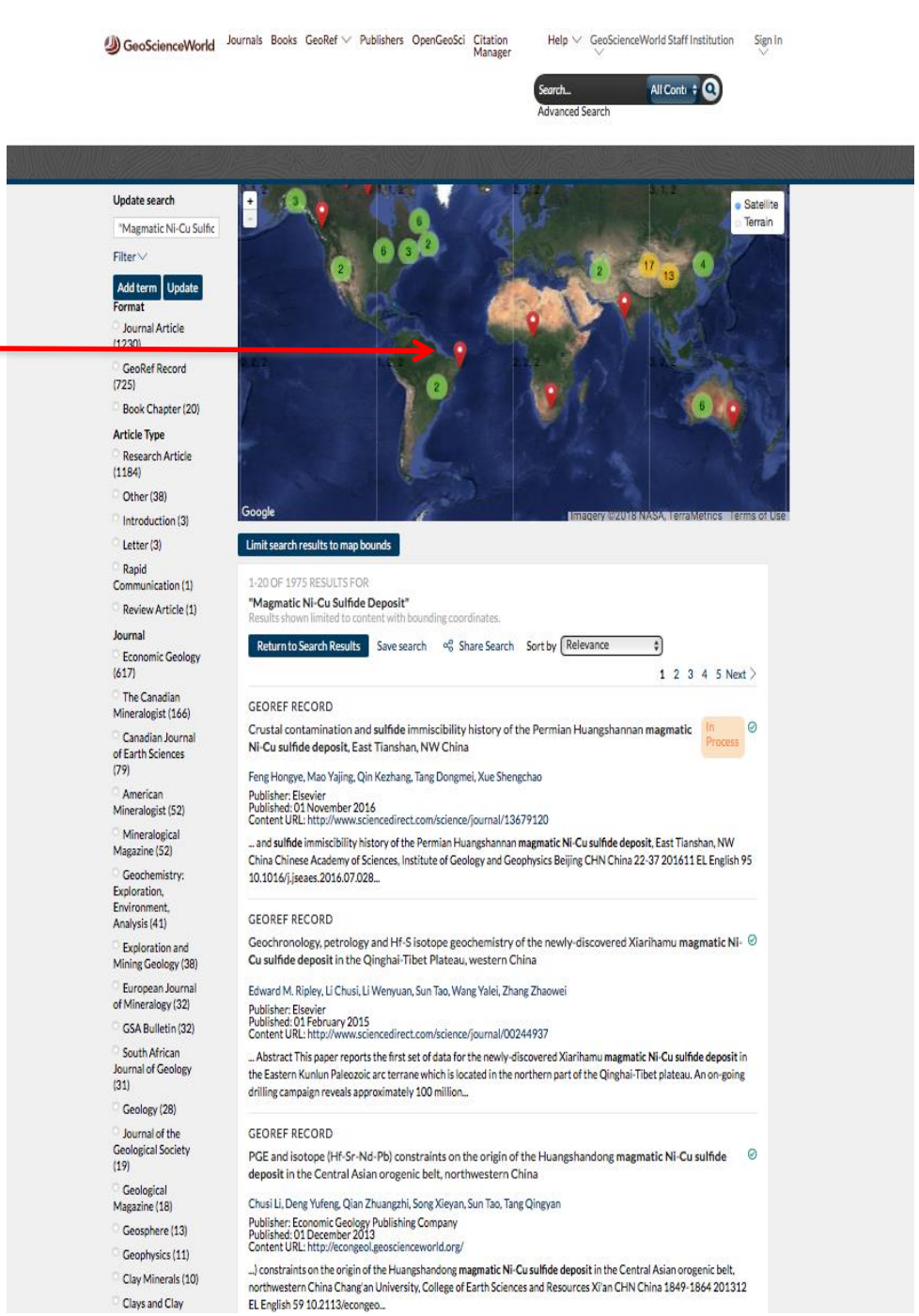

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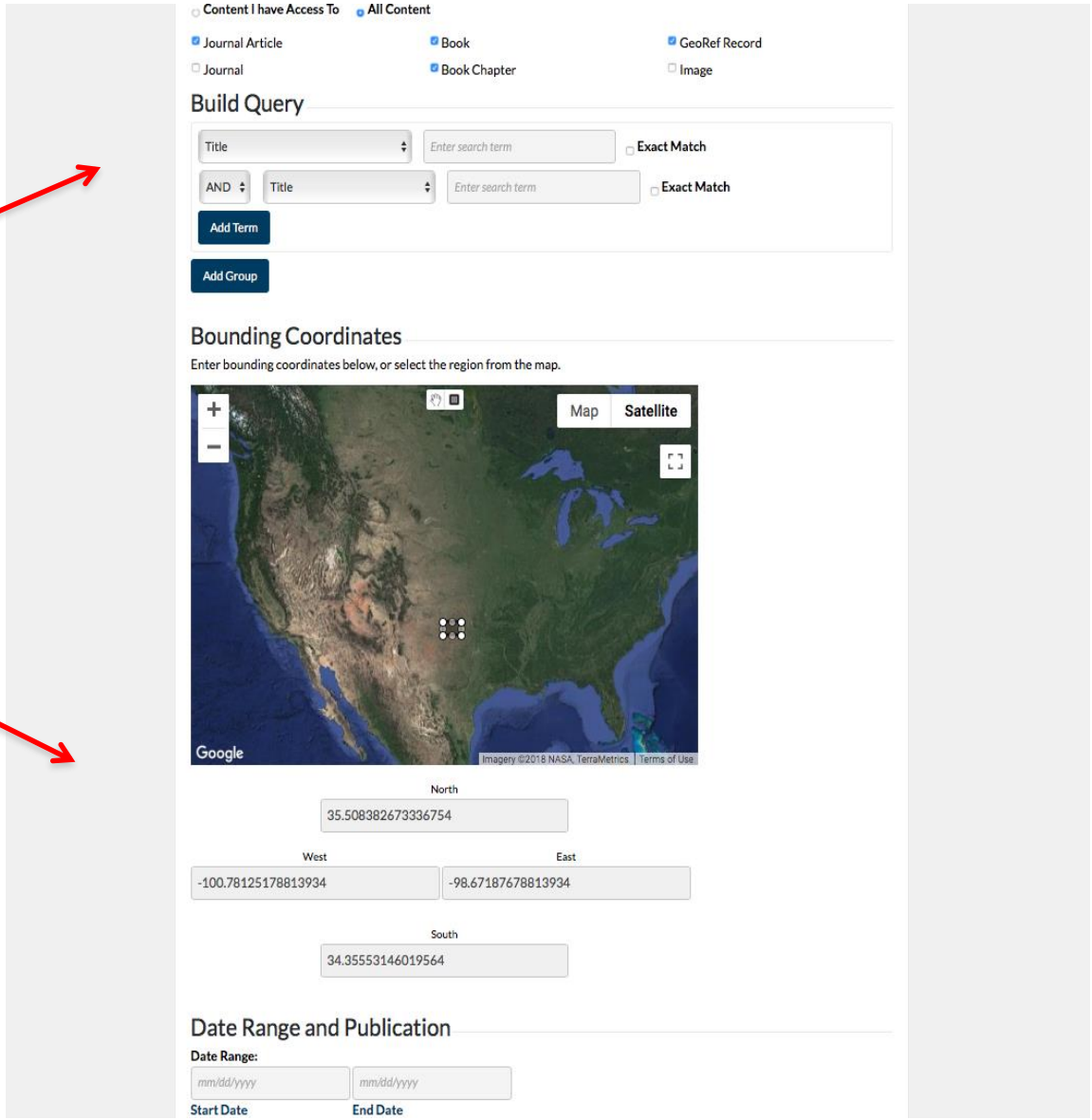
Build query by location, date range, DOI, publication, GeoRef category



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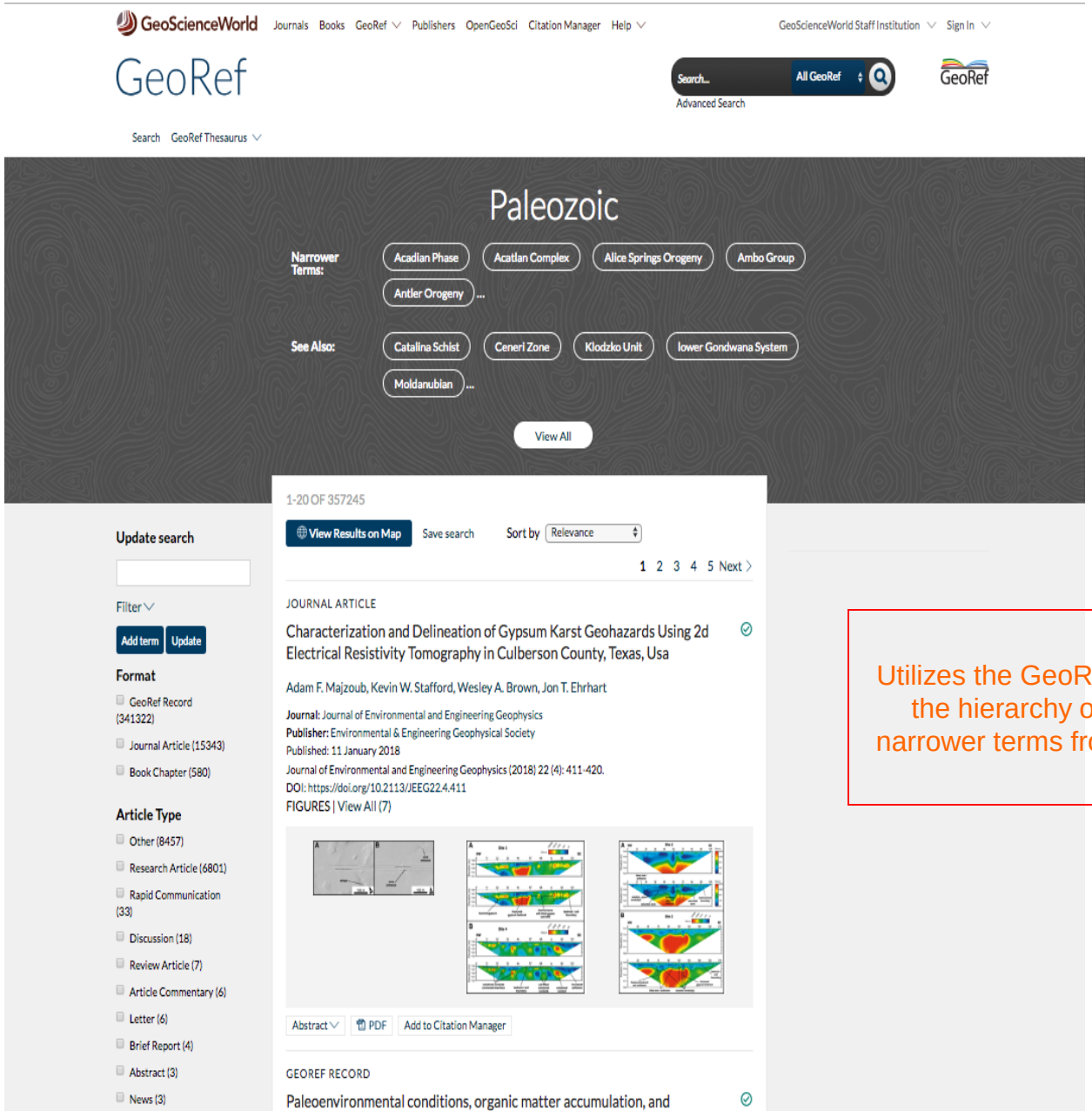

Utilizes the GeoRef keywords and the hierarchy of broader and narrower terms from the thesaurus

GeoRef Record

GEOREF RECORD

Chemical and structural changes in vitrinites and megaspores from Carboniferous coals during maturation

Laura Zieger, Ralf Littke and Jan Schwarzbauer
Chemical and structural changes in vitrinites and megaspores from Carboniferous coals during maturation
International Journal of Coal Geology (January 2018) 185: 91-102

Index Terms/Descriptors
aliphatic hydrocarbons, alteration, aromatic hydrocarbons, benzene, Carboniferous, Central Europe, chemical properties, chromatograms, coal, Curie point, Europe, FTIR spectra, gas chromatograms, Germany, hydrocarbons, infrared spectra, ion chromatograms, lithotypes, macerals, mass spectra, molecular structure, North Rhine-Westphalia Germany, organic compounds, Paleozoic, phenols, pyrolysis, Ruhr, sedimentary rocks, spectra, spores, thermal maturity, Upper Carboniferous, vitrain, vitrinite, Westphalian, Lembeck Formation

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Abstract

Chemical and structural changes occurring in kerogen upon thermal alteration are identified and analysed based on a set of naturally matured Carboniferous coals from the Ruhr Basin (Germany). For this purpose, handpicked vitrinite from eleven samples comprising a maturity range from 0.55 to 2.86% VR (sub r) was analysed using attenuated total reflectance infrared spectroscopy (ATR FT-IR) and Curie Point pyrolysis gas chromatography/mass spectroscopy (CP-Py-GC/MS) at two pyrolysis temperatures. Additionally, reflectance mu FT-IR was used to assess variations in the proportions of functional groups in megaspores from five oil mature coal samples. Infrared spectra of the vitrinites show a clear decrease in aliphatic CH (sub x) absorbance in favour of aromatic CH absorbance, pointing out an increase in aromaticity with increasing maturity. Spectra of megaspores are dominated by the absorbance of the aliphatic CH (sub x) stretching region and reveal the loss of C=O groups with increasing maturity, while the degree of aromaticity (gamma CH/nu CH (sub x)) increases slowly compared to that of the vitrinite spectra. Vitrinites pyrolysed at 590 degrees C show higher yields in aliphatic hydrocarbons than those pyrolysed at 764 degrees C, while at the higher pyrolysis temperature the yields in aromatic compounds, including phenols and sulphur-containing aromatics are higher. The aromatic fraction of the pyrolysates, in particular the relative amount of polyaromatics increases upon maturation, while the henolic fraction decreases in favour of benzenes. Major processes leading to these structural and chemical changes in vitrinites and megaspores are defunctionalisation of oxygen-containing groups, the loss of aliphatic compounds and the formation of monoaromatic molecules. These prevail over the condensation of aromatic ring-structures, which is, however, evidenced by increasing proportions of polyaromatic fractions in the pyrolysed vitrinites.

ISSN: 0166-5162

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Serial Volume: 185

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Author(s): Zieger, Laura; Littke, Ralf; Schwarzbauer, Jan

Affiliation: Rheinisch-Westfaelische Technische Hochschule Aachen, Institute of Geology and Geochemistry of Petroleum and Coal, Aachen, Germany

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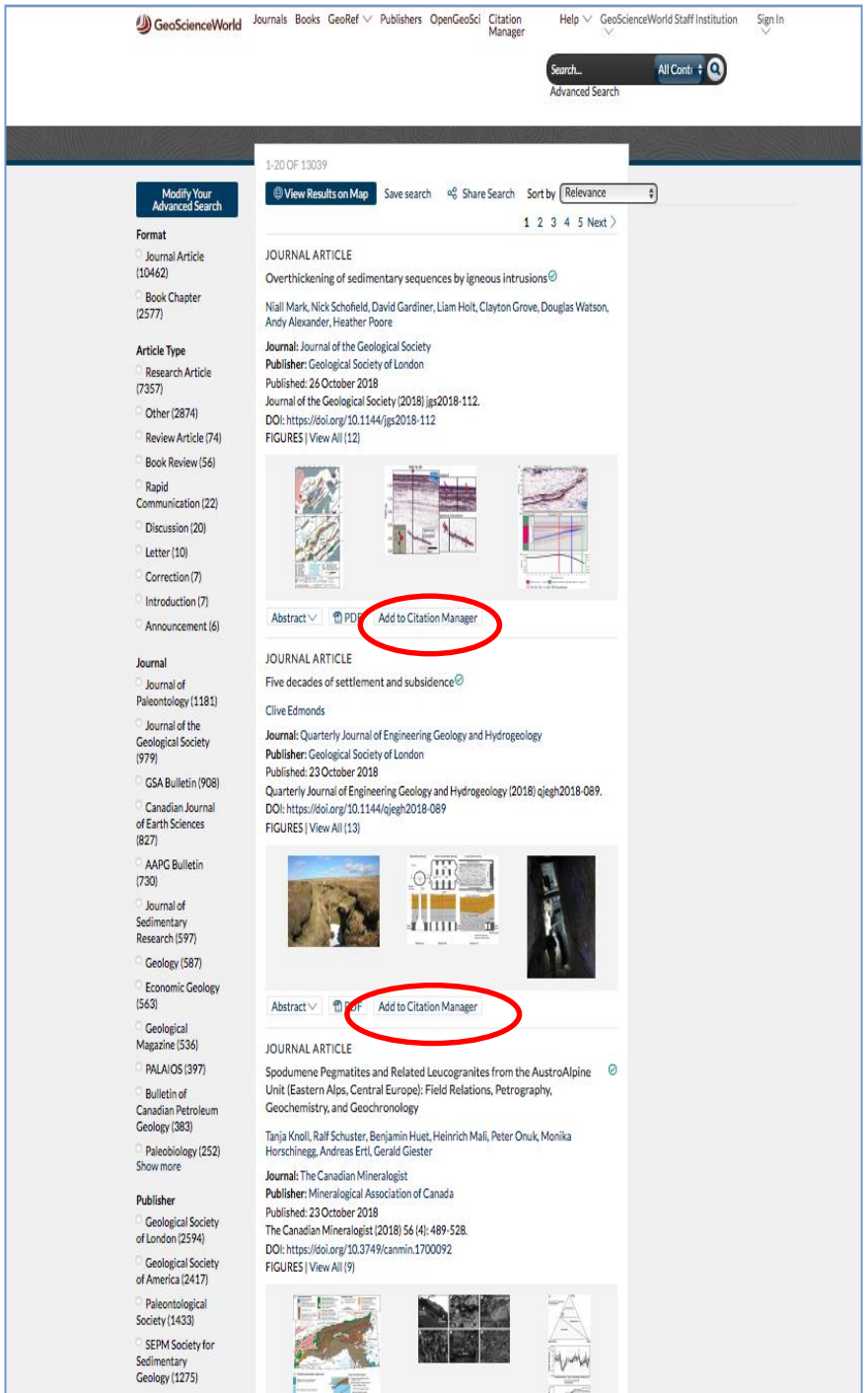

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(17 October 2018) qjegh2018-083.
DOI: 10.1144/qjegh2018-083

Detrital Clay Coats, Clay Minerals, and Pyrite: A Modern Shallow-Core Analogue For Ancient and Deeply Buried Estuarine Sandstones
Joshua Griffiths; Richard H. Worden; Luke J. Wooldridge; James E. P. Utley; Robert A. Duller
Journal of Sedimentary Research (23 October 2018) 88 (10): 1205–1237.
DOI: 10.2110/jsr.2018.56

Spodumene Pegmatites and Related Leucogranites from the AustroAlpine Unit (Eastern Alps, Central Europe): Field Relations, Petrography, Geochemistry, and Geochronology
Tanja Knoll; Ralf Schuster; Benjamin Huet; Heinrich Mali; Peter Onuk; Monika Horschinegg; Andreas Ertl; Gerald Giester
The Canadian Mineralogist (23 October 2018) 56 (4): 489–528.
DOI: 10.3749/canmin.1700092

Five decades of settlement and subsidence
Clive Edmonds
(23 October 2018) qjegh2018-089.
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Overthickening of sedimentary sequences by igneous intrusions
Niall Mark; Nick Schofield; David Gardiner; Liam Holt; Clayton Grove; Douglas Watson; Andy Alexander; Heather Poore
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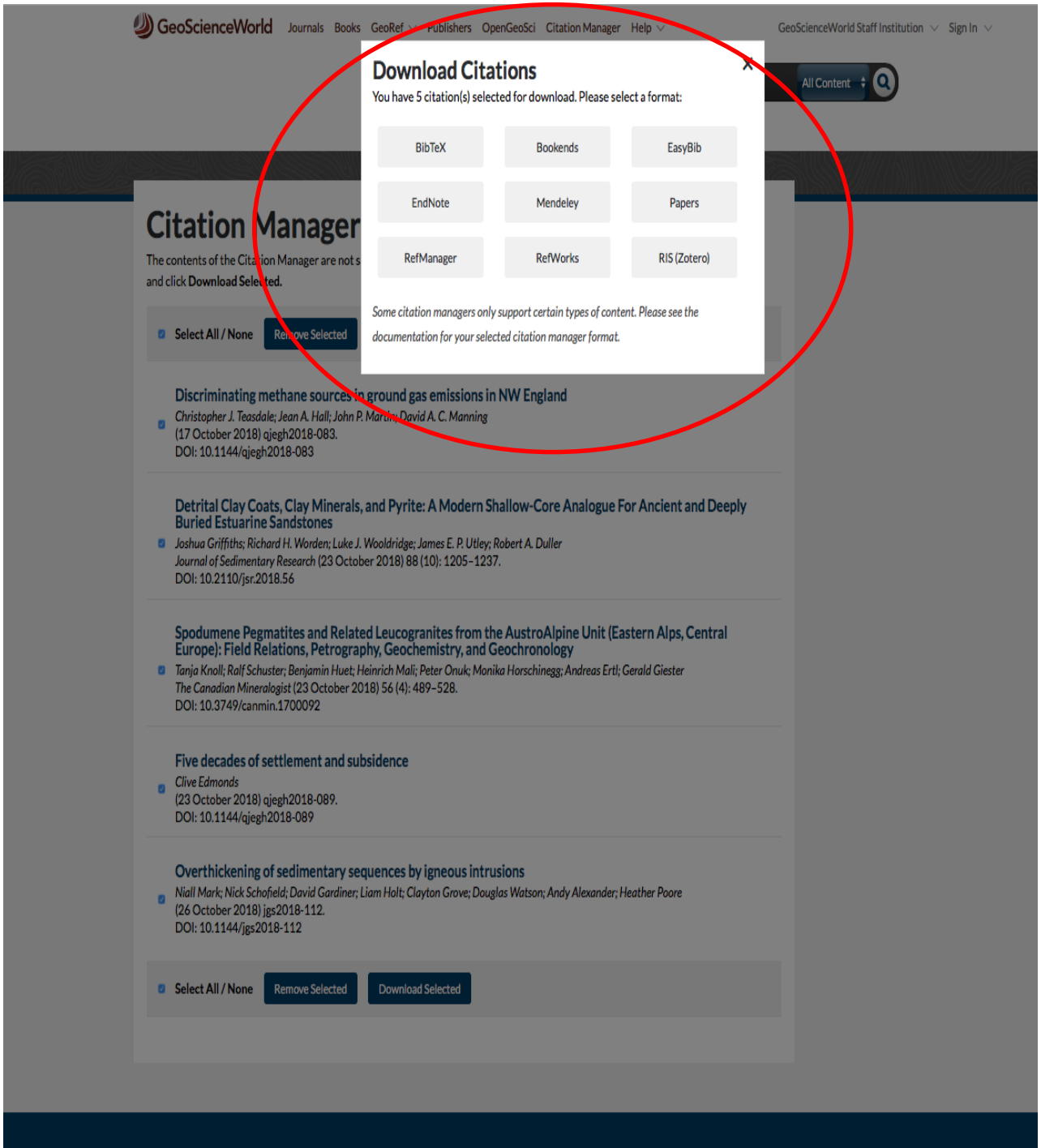
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