

Materials science information resource guide

Introduction

The Moore Library

The Moore Library houses the current working collections of the University Library in materials science, as well as mathematics and allied physical sciences. The Library acquires material to support both research and teaching activities in these subjects.

A large collection of older print material is retained at the main [University Library](#) building on West Road.

Help and advice

Advice on the use of the Library, its collections, or any information-based issue may be obtained from the Library's subject specialist staff, who can be contacted on (01223 7) 65676/7 or moore-library@lib.cam.ac.uk. Sue Lambert (65677, sv120@cam.ac.uk) has particular responsibility for materials science.

Joining the Moore Library

The Moore Library admits all students and senior members of the University, and other persons in possession of a valid University Library or Medical Library card.

Outside staffed hours, access to the Library for reference purposes is provided to holders of University Cards that have been validated for 24-hour access.

Registered readers eligible for 24-hour access are:

1. Undergraduate students
2. Postgraduate students
3. Senior members of the University and research staff

Please note that all persons admitted to the Library are required to register as readers. Reader registration and card validation for 24-hour access must be done in person between 0930 and 1630 Monday - Friday.

Arrangement of print collections

Classification

Books and journals in the Library are shelved according to the Library of Congress (LC) classification scheme, an alphanumeric system in which the major subject divisions are allocated a single or double letter code between A and Z. Books are fully classified, while journals are just given a one- or two-letter classmark and then arranged alphabetically within this by title.

Although many books will be classified in the T (for Technology) sections, due to the interdisciplinary nature of materials science, it is likely that you will also become familiar with other science classes, e.g. QD for chemistry.

Broad materials-science-related areas include:

Ceramic technology	TP785-TP869
Electronic materials	TK7869-TK8360
Engineering materials	TA401-TA492
Metallurgy	TN600-TN997
Polymer manufacture	TP1080-TP1092

Catalogue searching

To find items within the Moore Library (and simultaneously the University Library and its other dependent libraries), search using [Newton](#).

A wide variety of search options are provided (see [online help](#) for details), but the three basic types described below will enable you to find most things you want.

Journal Title Search

You want to find the journal article given in the reference:

H. Jones

[1] *The solid-liquid interfacial energy of metals: calculations versus measurements, Mater. Lett., 53 (2002), 364-366.*

Individual articles within journals are *not* separately catalogued, so you need to look for the journal as a whole and then check whether or not that particular volume is held by the Library.

Use the 'Basic' search option, and select 'within Journal title':



The screenshot shows the Newton search interface. At the top, there are four tabs: 'Basic', 'Advanced', 'Subject', and 'Author'. The 'Basic' tab is selected. To the right of the tabs is a 'Search History' link. Below the tabs is a search box containing the text 'materials letters'. To the right of the search box is a dropdown menu labeled 'within' with the selected option 'Journal title (omit 'The' & other leading articles)'. Below the search box is a 'Limit To:' dropdown menu with the selected option 'none'. Below the 'Limit To:' dropdown is a 'Records per page:' dropdown menu with the selected option '25 records per page'. At the bottom right of the search interface is a 'Search' button.

Type the *beginning* of the journal title into the box, and click on 'Search'.

As in this example, journal titles are often abbreviated in references. If you don't know what an abbreviation stands for, try looking it up in Alkire's *Periodical title abbreviations*, at classmark Ref Z6945.A2 .P47 2001.

You now get a list of all journal titles that match the phrase you typed in.

There are unfortunately often at least two records for each journal due to previous cataloguing practice: check both before you conclude the journal you're looking for is not available.

Newton catalogue:Cambridge University Library & Dependent Libraries

2 results found

Journal title (omit 'The' & other leading articles)(materials letters)

[Edit / New Search](#)

Print Export E-mail Select Page All Sort By:

<input type="checkbox"/>	 Materials letters. 1982 TA no item information, Betty & Gordon Moore Library: Journals
<input type="checkbox"/>	 Materials letters [electronic resource]. 1982 Online no item information, Electronic resource

Click on the title of the first journal to be taken to the record.

Title: Materials letters.
Other Entries: Materials Research Society.
Published: Amsterdam : North-Holland, 1982-
Vol. 1, no. 1 (June 1982)-
Description: v. : ill. ; 26 cm.
Semimonthly, <Mar. 2003->
Monthly, Nov. 1985-
Bimonthly, June 1982-Sept. 1985
Some issues combined.
ISSN: 0167-577X
Notes:
An interdisciplinary journal devoted to the rapid publication of short communications on the science, applications and processing of materials--Cover.
Issued in affiliation with: Materials Research Society, July 1983-
Indexed In: Chemical abstracts
Subjects: Materials--Periodicals.

Holdings Information

Location:	Betty & Gordon Moore Library: Journals
Call Number:	TA
Number of Items:	0
Status:	No information available
Recent Issues:	v. 63, no. 17 (2009)

You can now see that the year you need is in the Library, and that the journal is shelved at classmark TA.

Note that this title is also available online as an electronic resource, see the second item from your original search:

2 results found

Journal title (omit 'The' & other leading articles)(materials letters)

[Edit / New Search](#)

Print Export E-mail Select Page All Sort By:

- [Materials letters.](#)
1982
TA
no item information, Betty & Gordon Moore Library: Journals
- [Materials letters \[electronic resource\].](#)
1982
Online
no item information, Electronic resource

Again, click on the title of the journal to be taken to the record:

Materials letters

Title: [Materials letters \(Online\)](#)
[Materials letters \[electronic resource\]](#).

Other Entries: [ScienceDirect \(Online service\)](#)

Published: Amsterdam : North-Holland : 1982-
Vol. 1, issue 1 (June 1982)-

Description: Text (electronic journal).
30 issues a year, <2004->
Frequency varies, 1982-
Some issues combined.

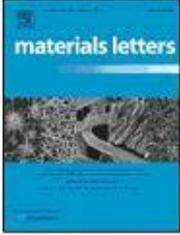
Notes: Title from contents screen (ScienceDirect, viewed Nov. 16, 2005).
Latest issue consulted: Vol. 60, issue 2 (Jan. 2006), viewed Nov. 16, 2005.
Access restricted to authorised University of Cambridge users
Mode of access: World Wide Web.

Subjects: [Materials--Periodicals.](#)
[Matériaux--Périodiques.](#)

Links: [Full text available from ScienceDirect Materials Science Backfile: 1982 to 1994](#)
[Full text available from ScienceDirect Freedom Collection: 1995 to present](#)

The Links lines at the bottom of the screen give details about what is available; in this case full text is available from 1982 to the present.

Click on the relevant line to be taken directly to the online version of the journal:



Materials Letters
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[Sample Issue Online](#) | [About this Journal](#) | [Submit your Article](#) | [Shortcut link to this Title](#)
 New Article Feed | Alert me about new Volumes / Issues
 Add to Favorites

< Previous vol/fiss | Next vol/fiss >

Volume 64, Issue 22 **In Progress** (30 November 2010) articles 1 - 44

= Full-text available
 = Abstract only
 Articles in Press

E-mail articles | Export citations | PDF downloader | Open all previews

This issue is In Progress but contains articles that are final and fully citable. For recently accepted articles, see [Articles in Press](#).

Author / Title Search for Books

You want to find the book given in the reference:

M. Ohring
 [2] *Materials science of thin films*, Academic Press, 2002.

Use the 'Advanced' search option.



Basic | **Advanced** | [Search History](#)

Search: ohring all of these within Author Name

AND

materials all of these within Title

Type the author's surname into the first box and choose 'within Author Name'.

Type a distinctive word from the title into the second box and choose 'within Title'.

Click on 'Search' at the bottom of the screen.

You now get a list of all the books which match those two words:



The date for the second book matches your reference, and clicking on this takes you to its record:

Materials science of thin films : Milton Ohring.

Main author: Ohring, Milton, 1936-
Title: Materials science of thin films : deposition and structure / Milton Ohring.
Edition: 2nd ed.
Published: San Diego, Calif. : Academic Press, c2002.
Description: xv, 794 p. : ill. ; 24 cm.
ISBN: 0125249756
Notes: Previous ed.: 1992.
 Includes bibliographical references and index.
Subjects: Thin films.

Holdings information

Location:	Betty & Gordon Moore Library
Classmark:	TA418.9.T45 .O47 2002
Number of Items:	1
Status:	- Available

Again, the Library holds the book, it is available, and the classmark is TA418.9.T45 .O47 2002.

Books in numbered series

Sometimes you will come across references to books by their series title and number only, or even more confusingly, an article within one of these books. They are not journals, despite the fact that references can make them look very similar, and are best searched for as shown below. [If you are unable to tell whether a reference is to a series or a journal, ask for help or just try both methods of searching.]

You want to find the following work:

[3] *Advances in metallic alloys*, vol. 2 (2002), pp. 299-304

Use the 'Advanced' search option.

Basic **Advanced** [Search History](#)

Search: all of these within

all of these within

Alter the top option to be 'within Series', and type keywords from the series title plus the volume number into the search box. Click on 'Search' at the bottom of the screen.

In this example, only one book matches, so you are taken straight to the record:

Iron in aluminum alloys : N.A. Belov and A.A. Aksenov and D.G. Eskin ; translated from the Russian by A.I. Kozlenkov.

Main author: Belov, N. A.
Title: Iron in aluminum alloys : impurity and alloying element / N.A. Belov and A.A. Aksenov and D.G. Eskin ; translated from the Russian by A.I. Kozlenkov.
Other Entries: Aksenov, A. A.
 Eskin, D. G.
Published: London : Taylor & Francis, 2002.
Description: xv, 342 p. : ill. ; 26 cm.
ISBN: 0415273528
Series: Advances in metallic alloys ; v. 2
Notes: Includes bibliographical references and index.
Subjects: Iron-aluminum alloys.

Holdings Information

Location:	Betty & Gordon Moore Library
Classmark:	TN775 .B45 2002
Number of Items:	1
Status:	- Available

Again, this is the book that you want, it is available, and the classmark is: TN775 .B45 2002

LibrarySearch



LibrarySearch

[LibrarySearch](#) enables the cross-searching of records for printed books, journals, and electronic material held in all the libraries in the University of Cambridge. Records from the [Newton](#) library catalogues and the [DSpace@cambridge](#) repository are included, and searches can be expanded to include article databases such as JSTOR.

Networked information services

Campus wide information services are co-ordinated and supported centrally by the University Library.

The main [Electronic Resources](#) page on the Library website provides a search/browse option for both electronic journals and online databases, which is useful if you know the title of the resource you want to utilise; and alternatively lists all the resources available in each given subject area, e.g. 'Materials Science and Metallurgy'.

Access and passwords

Many networked electronic services are made available within the "cam" domain via IP address recognition, and for these no password is required. Most of the remainder are accessible using a [Raven](#) password.

Raven passwords are [issued](#) to current staff and students of the University by the Computing Service.

Frequently-updated information about access, passwords, and copyright is [available](#) from the University Library.

Retrospective literature searching

Databases

If you are interested in finding out what books and articles from journals and conference proceedings exist on a particular subject or by a given author (say), a couple of useful starting points would be:



[Web of Knowledge](#). This platform provides access to a variety of valuable resources, including *Web of Science* and *Inspec*.

Web of Science is the online version of the *ISI Citation Indexes* and *ISI Proceedings*. Updated weekly, the databases contain abstracts and indexes for journal articles and a small selection of monographic series volumes in all subject areas from at least 1970 onwards (from 1899 for science subjects); along with articles in conference proceedings from 1990 onwards. Since each record contains a list of all references cited in the corresponding article, it is possible to search for all articles that cite a known author or work.

Inspec is the online version of *Science Abstracts*. Updated weekly, the database contains abstracts of journal articles and conference papers (as well as significant books, technical reports, and dissertations) from 1969 onwards.

It is also possible to cross-search all these products. You need a Raven password to make use of this package of resources.

Scopus [Scopus](#) - is the largest abstract and citation database of research literature (journals, book series, conference proceedings and patent records) and quality web sources across all subject areas. It contains records for selected material dating back to 1823, and is updated daily.

Databases of dissertations and theses

Dissertations and theses are generally indexed separately from other types of literature. The two databases available (which cover all subject areas) are:

[EThOS \(Electronic Theses Online Service\)](#) - a database provided by the [British Library](#) which aims to offer a unified access point for all theses produced by UK Higher Education. Of the theses listed, some will be available in electronic form for immediate free download, while others will only be represented by a summary 'catalogue-style' record. This database is completely free to search, and only requires you to register (which is also free) if you wish to download any of the theses. Once registered, you are also able to request digitisation of any of the theses not yet available for download, but a charge does apply for this service.

ProQuest

[Proquest Dissertations & Theses](#) - a database of references to doctoral and masters dissertations from 1861 onwards. Although the main focus is on the US, dissertations from universities in Europe and the rest of the world are also included. This database works on IP address recognition.

All University of Cambridge theses (for the degrees Doctor of Philosophy, two-year Master of Philosophy, Master of Science and Master of Letters) accepted since 1921 are held in the Manuscripts Reading Room at the University Library. Such theses from 1970 onwards have records on the [Newton Manuscripts and Theses](#) catalogue. A small but increasing number of Cambridge theses are available for immediate download from [DSpace@Cambridge](#).

Current awareness

It is possible to sign up for services that will send you emails alerting you as new material is published in a given journal or on a particular subject. Many are provided by publishers themselves, but a good place to start would be:



[ZETOC Alert](#). ZETOC itself is another useful general database of references to journal articles and conference papers maintained by the British Library, while by signing up to ZETOC Alert you can be emailed the table of contents from particular journals or receive details of articles which match your predefined search criteria.

Ejournals

The University Library subscribes to a large number of electronic journals. These can be accessed from the [ejournals@cambridge](#) page, which provides title and ISSN searches that return information on which years are included in the subscription and how access to the titles is controlled.

For example:

Showing page 43 of 570 pages. [<< Previous Next >>]
Annual review of materials research [1531-7331]
Annual Reviews - **Avail from:** 1971 volume: 1 issue:1 till present
Access: Available on Campus. Off-campus access available through Raven password or VPDN
EBSCOhost Business Source Complete - **Avail from:** 2001 **until:** 2005
Access: Available on Campus. Off-campus access available through Raven password or VPDN
more options ...

Ebooks

The University is also building up a collection of ebooks, which can be accessed from the [ebooks@cambridge](#) page.

The package of greatest interest to materials scientists is that published by [Springer](#).

Related links

Further information about the [Materials Science and Metallurgy Department Library](#).