

Information Services Collection Policy: School of Chemistry

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Service:	Library Collection Policies
First Published:	April 2004
Last Review:	26/11/2012
Next Review:	01/08/2013

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1. Introduction

Information Services holds and provides access to information resources to support the research, learning, teaching and business activities of the University. For the same purposes, but also in support of the actual and potential interests of the local, regional, national and international research community, the library holds and provides access to Manuscript and Special Collections.

2. Overview

2.1. Collections

Information Services aims to provide information resources to fit the priorities of the School of Chemistry, within practical and budgetary constraints. Information Services will attempt to acquire sufficient material for undergraduate and taught postgraduate courses. It also aims to hold key materials which support the research activities of the School.

Library collections include, but are not limited to, the following types of information resources:

- printed material, including books, pamphlets, journals, newspapers, music, maps etc
- eBooks and eJournals
- electronic databases
- photocopies and electronic copies
- photographs
- multimedia materials
- microforms
- manuscripts
- sound, video and film recordings.

Information resources are provided under the following arrangements:

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- owned by the University and managed by Information Services
- licenses or other permission from the rights holder
- partnerships and other collaborative arrangements
- public domain resources.

2.2. Global library collections

Information Services is managing a global collection.

Many items required by users will not be available in the library collections of the University of Nottingham. Efforts will be made to obtain access to such items through Inter-Library Loan or other document delivery services. The cost of such requests, up to a certain quota, will be subsidised by Information Services, though a nominal fee will be charged. The fee for requests in excess of the quota, however, will approximate the full cost, excluding staffing and administrative costs.

3. Mechanisms for implementation of the policy

3.1. Scope of the current policy

The policy is to acquire materials on all aspects of chemistry relevant to the learning, teaching and research carried out in the school. In addition materials will be acquired which build on the strengths within the chemistry collections in order to maintain their local and regional importance and to provide a broad, balanced collection for further research and project work.

The policy is to be monitored by the Science & Engineering Faculty Team, and the Library Liaison Representative for the School of Chemistry. Each year the policy will be reviewed and, if necessary, revised by a member of the Science & Engineering Faculty Team and the Library Liaison Representative.

3.2. Provision

Material will be purchased to support the current teaching and research interests within the department.

3.2.1. Teaching and Learning

Particular subject areas relevant to **teaching and learning** include the following:

- Analytical chemistry
- Atmospheric chemistry
- Biological chemistry
- Bioinorganic chemistry
- Catalysis
- Chemical bonding and reactive intermediates
- Chemical complexes and clusters
- Chemical physics

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- Computational chemistry
- Coordination chemistry
- Drug discovery
- Enzymology
- Green chemistry
- History of chemistry
- Industry and enterprise , entrepreneurial skills
- Inorganic chemistry
- Macromolecular chemistry
- Materials chemistry
- Medicinal chemistry
- Molecular structure and interactions
- Molecular modelling
- Molecular Physics
- Nanoscience and nanomaterials
- Natural products chemistry
- Organic chemistry
- Organometallic chemistry
- Nuclear magnetic resonance in chemistry
- Polymer chemistry
- Reaction mechanisms and kinetics
- Physical chemistry
- Protein chemistry
- Quantum chemistry
- Solid-state chemistry
- Spectroscopy
- Stereochemistry
- Surface and interface chemistry
- Synthesis
- Analytical skills, computing, statistics and mathematical modelling
- Practical laboratory and transferable skills

3.2.2. Research

Special areas of current **research** interest include the following:

Inorganic and Materials Chemistry

- Biological inorganic chemistry
 - Chemistry of the catalysis accomplished by metal centres in enzymes
 - Electronic structure of transition metal complexes and metalloenzymes
 - Metal intercalators as IR probes
- Coordination, organometallic and supramolecular chemistry
 - Synthesis of transition metal and f-element complexes
 - Homogeneous catalysis by organometallic complexes
 - Single isomer chiral metal complex chemistry

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- Surface, solution and solid-state supramolecular self-assembly
- Crystal engineering
- Photochemistry and time-resolved spectroscopy to study excited states and reaction mechanisms
- Green and Analytical Chemistry and Clean Technology
 - Cleaner reaction chemistry in supercritical water
 - Continuous reactions in supercritical CO₂
 - Electrochemical and Catalytic processes in ionic liquids
- Nanomaterials, Solid State and Polymer Chemistry
 - Carbon nanotubes and fullerenes
 - Nanostructure formation via self-assembly of molecular hosts
 - Nanomaterials and polymers for gas storage, absorption & extraction
 - Polymer synthesis and processing using supercritical carbon dioxide
 - Synthesis of new magnetic oxides and ionic conducting materials
- Structural Chemistry
 - Single crystal X-ray diffraction and structural studies
 - Experimental charge density studies

Organic and Biological Chemistry

- Chemical and Structural Biology
 - The synergistic combination of organic synthesis, chemical genetics, biochemistry and enzymology
 - Nucleic acid chemistry and drug delivery
 - Nucleic acid structure, folding and drug interactions
 - Protein biochemistry and molecular biology
 - Design and synthesis of enzyme inhibitors for cancer chemotherapy
 - Protein engineering, structural biology and molecular modeling
 - Biophysical and biochemical analysis of protein-protein interactions and protein folding
- Development of New Synthetic Methodology
 - Organometallic reactions in synthesis
 - Use of reactive intermediates, enolates and pericyclic processes

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- Asymmetric synthesis using chiral reagents and catalysts
- Enantioselective reactions, including desymmetrisation, deprotonation, enolate and alkylation chemistry
- Development of new Michael additions, oxidations and carbenoid insertions and rearrangements
- Target Organic Synthesis
 - Target synthesis
 - Natural product chemistry, including marine natural products
 - Asymmetric synthesis

Physical and Theoretical Chemistry

- Cluster science
 - Cluster formation and structure
 - Molecular Complexes
 - Microsolvation, chiral recognition
- Computational and quantum chemistry
 - Density Functional theory
 - Calculations on core and excited states of molecules
 - Molecular Dynamics simulations
 - Computer simulations of protein folding
 - Molecular interactions, molecular recognition and docking
 - Advanced spectral simulation
 - Materials modeling
 - Cheminformatics and bioinformatics
- Statistical thermodynamics
- Laser spectroscopy and photon-induced dynamics
 - Intramolecular dynamics of molecules in excited states
 - Structure, bonding, and interaction potentials in small metal containing complexes
 - Ultrafast time-resolved studies
 - Coherent Control
- Synchrotron radiation and Free-Electron Laser studies
 - Dynamics of ionisation in small molecules and influence of chirality
 - Surface structure determination
- Molecular astrophysics, astrochemistry, and atmospheric chemistry

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- Solid-state nuclear magnetic resonance
 - Use of solid-state NMR to study materials and biological systems
- Surface science
 - Study solid/liquid and solid/gas interfaces
 - Study of liquid surfaces in vacuum
 - Role of catalysts in the preparation of advanced materials
- Electrochemistry
 - Fuel Cell catalysis
 - Electrochemistry at microelectrodes
- Statistical Thermodynamics

Research is also undertaken by members of the School within the following associated institutes:-

- Centre for Biomolecular Sciences
- Centre for Sustainable Chemistry
- Nottingham Nanotechnology and Nanoscience Centre

Where there is overlapping interest or joint research projects with other departments, schools and faculties, the Science & Engineering Faculty Team will collaborate with colleagues to ensure provision of relevant material.

3.3. Funds for acquisition

Funds which may be used for purchase of materials for the School of Chemistry are:

- the School of Chemistry book fund
- the Science Area fund
- bids for a share of funding to support new modules/new lecturers

The level of funding will be communicated to the school each year as early as possible via the School Library Liaison Representative. The representative will be regularly informed of the status of the fund. Updates can be obtained at other times as required from the Science & Engineering Faculty Team.

Periodicals are purchased through separate Faculty-based periodical funds.

3.4. Selection and recommendation mechanisms

The following tools may be used for selection of resources:

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- information received from module convenors and contributing lecturers
- communications and suggestions from the School
- publishers' and booksellers' catalogues (print or online)
- current awareness listings e.g. Coutts Library Services profile reports

The Science & Engineering Faculty Team is also alerted to heavily reserved items or items reported missing or damaged. The Science & Engineering Faculty Team is responsible for ordering extra copies or replacing these items.

Information Services also relies on academic staff for book suggestions. The books suggestions form is available online:
www.nottingham.ac.uk/is/uon/forms/book-suggestions.php

3.5. Ordering and receipt mechanisms

Items are ordered by the Science & Engineering Faculty Team or centrally by the Acquisitions department and are recorded on the Library Management System. Urgent orders are normally sent within five working days; all orders are sent in accordance with Key Performance Indicators.

Items currently on order are displayed on the Library Online Catalogue. Reservations may be placed on items at any stage. Further information regarding items on order can be obtained from the Science & Engineering Faculty Team.

The Science & Engineering Faculty Team can be contacted for further information on progress.

3.6. Donations

The collections have, over the years, been enhanced by donations. Donations will normally be added to stock only if relevant to the current teaching or research profile or if they strengthen existing specialist areas. Substantial donations must be notified to, and agreed with, the Science & Engineering Faculty Team before delivery.

There is a separate Donations Policy
<http://workspace.nottingham.ac.uk/download/attachments/62358464/Donations+policy+2011.pdf>

3.7. Classification and storage

Items acquired will be stored in the most appropriate library and classified in the appropriate subject area. Items may occasionally be duplicated between libraries.

Items are classified according to the Library of Congress classification scheme. A copy of this scheme can be consulted online from the Library of Congress web site: <http://www.loc.gov/catdir/cpsolcco/>

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Periodicals are arranged in alphabetical order by title in the George Green library.

Extra copies of books which are in heavy demand are bought where they are available. These may be stored on the main shelves as ordinary loan or in the Short Loan Collection.

The classification scheme used in the Short Loan Collection is the same as on the main shelves.

Material which is fragile or less-heavily used may be placed in the local library stores or at the King's Meadow Campus. The library catalogue may be used to request items at the King's Meadow Campus, which will normally be made available within two working days. Items in the local library stores are available for consultation and in some cases may be borrowed. This material can be consulted (and, in most cases, borrowed) during staffed library opening hours on request at the main lending desk.

3.8. Subject resources

Important printed and electronic resources of interest to the School of Chemistry are available through the eLibrary Gateway. These resources include bibliographic databases, internet subject gateways, full text resources and electronic journals.

The following electronic resources are of particular relevance to the School of Chemistry:

- Abstracts in New Technologies and Engineering (ANTE)
- Astrophysics Data System
- BIOSIS
- CDS Chemical Database Service
- Corrosion Abstracts
- CRC Handbook of Chemistry and Physics
- eBrary (online books)
- EiCompendex
- EmBase
- Environmental Sciences & Pollution Management
- Index to Theses
- Inspec
- International Tables for Crystallography
- Knovel Library
- Landolt Bornstein
- Medline
- Merck Index
- Metadex
- Methods in Enzymology
- Oxford Reference Library
- Powder Diffraction File
- Reaxys
- Sax's Dangerous Properties of Industrial Materials
- SciFinder Scholar
- Scopus (Elsevier)
- UNLOC- Library Online Catalogue
- Web of Science
- Wiley Online Library
- Zetoc

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3.9. Journals

Journal price inflation is consistently higher than average inflation. This means Information Services is unable to invest in new print journal titles at present without a balancing cancellation.

The department has an interest in the following e-journal packages:

- American Chemical Society
- American Institute of Physics
- Annual Reviews
- BioMed Central
- Cambridge Journals Online
- EBSCOhost
- Highwire Press
- IngentaConnect Journals
- IEEE/IET Electronic Library
- Institute of Physics + Archive
- Institution of Chemical Engineers Archive
- Journals@Ovid
- JSTOR Database
- Nature
- Nottingham ePrints
- Oxford University Press
- Royal Society Journal Archive
- Royal Society of Chemistry + Archive
- Royal Society of Medicine
- Sage Premier
- Science
- Science Direct (Elsevier)
- Springer Database
- SwetsWise Database
- University of Chicago Press
- Wiley/Blackwells

These and other individual electronic journals may be accessed via the eLibrary Gateway or the Library Online Catalogue (UNLOC).

3.10. Conference proceedings

Where conference proceedings contribute substantial information to the subject they may be acquired.

3.11. Standing orders

Information Services recognises the importance of continuing commitment to major monographs in series and attempts to maintain these where appropriate. Those currently charged to the School of Chemistry book fund are:-

- CRC Handbook of Chemistry and Physics
- Inorganic Syntheses
- International Tables for Crystallography
- Organic Reactions
- Organic Syntheses

The School also has an interest in the following book series purchased from other funds:-

- Experimental Methods in the Physical Sciences (Physics fund)

These titles will be reviewed to match changing teaching and research profiles.

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3.12. Theses and eDissertations

Printed copies of PhD theses are kept in the Central Store. Theses and dissertations may also be submitted to the library electronically. For more information see: <http://etheses.nottingham.ac.uk>.

3.13. Balance between printed and electronic resources

Information Services seeks to provide access to new electronic resources where appropriate, whilst taking care to monitor the balance between printed and electronic resources.

3.14. Reading lists

In order to ensure copies of recommended texts can be obtained in time for relevant modules, reading lists should be submitted by academic staff to the library 10 weeks before the start of the Semester. Module convenors should indicate on reading lists which books should be in short loan.

Reading lists should include details of author, title, edition (where applicable), year of publication, publisher and ideally place of publication and ISBN. A note of the expected number of students on the module should also be included.

Module convenors should inform the Science and Engineering Faculty Team when modules cease so that the online reading list can be deleted.

Module convenors are encouraged to make reading lists available online at: www.nottingham.ac.uk/is/gateway/readinglists.

3.15. Short Loan Collections

3.15.1. Books

The number of copies of a book ordered for the main shelves or Short Loan Collection will depend on factors such as:

- the number of students (and whether full- or part-time) on the module(s) for which it is recommended
- the length of reading list and/or prioritisation of the items on the list
- experience of usage of books recommended for modules within the department or specialism
- likely longevity of the module
- cost
- frequency of new editions and relevance of previous editions
- existence of online full-text versions
- overlap with other modules.

Use of books is monitored and extra copies are purchased as necessary.

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3.15.2. Photocopies

Photocopies of journal articles may also be held in the Short Loan Collection provided they are within permitted limits. Photocopies from originals within the library's own collection can be placed in the Short Loan Collection, provided the publisher participates in the Copyright Licensing Agency agreement. Any other material has to be obtained via the British Library copyright fee-paid service using the Inter-library Loan service.

3.15.3. Digitized copies

Documents covered by the terms of the Higher Education Scanning Licence, or for which separate permission has been obtained from copyright holders, may be acquired and made available in digitized form for students to access via the online reading lists.

3.16. Binding

Binding of material in the collections is supported from the binding fund. Titles selected for binding will be reviewed from time to time to ensure the preservation of heavily-used periodicals.

3.17. Expensive and interdisciplinary items

Expensive items, reference works, and items of an interdisciplinary nature can be recommended by academic staff and may be funded in full or in part by the Science Area book funds. The Faculty Team will liaise with colleagues in other subject areas where there is an overlap of interest.

3.18. Collection management

The collection is regularly monitored and the Relegation Policy is available online:

<http://workspace.nottingham.ac.uk/download/attachments/62358464/Library+Collections+Relegation+Policy+2010.pdf>

3.19. Collection development

The collection will be developed to support teaching and research activity in the School of Chemistry. Where it is appropriate, the collection will complement local and regional collections. The Science and Engineering Faculty Team will consider active participation with national collection management initiatives.

3.20. Information Literacy

Use of the collection will be supported through information literacy sessions provided by the Science & Engineering Faculty Team, including induction, longer sessions arranged through the Graduate School and tailored sessions for the School of Chemistry.

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The Studying Effectively pages at:

<http://www.nottingham.ac.uk/teaching/studyingeffectively> will give staff and students general information skills guidance and support.

3.21. Department of Manuscripts and Special Collections

This policy does not cover, in any detail, the work of the Department of Manuscripts and Special Collections within Information Services, whose holdings complement and extend core library collections. For advice on the department's collection policies, see

<http://www.nottingham.ac.uk/ManuscriptsandSpecialCollections/AboutUs/Policy/Collecting.aspx>