University of Reading

Chemistry

Collecting policy

User profile

This collection statement covers provision for the Department of Chemistry within the School of Chemistry, Food Biosciences and Pharmacy. The collections serve all staff and students in the Department.

Research interests

Research in the Department of Chemistry covers a wide range of areas split up into three main themes:

- Chemistry for Life and the Environment
- Materials Chemistry
- Molecular Chemistry

Chemistry for Life and the Environment includes biomedical and health-related research, environmental chemistry, and forensic science.

The Materials Chemistry group covers polymer chemistry, surface chemistry, and solid-state inorganic chemistry, with a particular focus on materials for sustainable energy applications.

Molecular Chemistry focuses on the development of new synthetic methodologies for the synthesis of natural products. This group uses the Chemical Analysis Facility and world-class spectroelectrochemical analysis laboratory in the department

Companies with significant current research links to Chemistry include AstraZeneca, Unilever, BioInteractions, CEM Analytical Services, Cytec UK, Dextra Laboratories, AWE, Eli Lilley, Dow Corning, DuPont, GlaxoSmithKline, Hofmann la Roche, Johnson Matthey, ICI-National Starch, Pfizer, Smith Detection and Xenova.

Dimensions of Teaching and Learning

Chemistry is focussing on its Chemistry BSc and MChem programmes each with the option of a Year in Industry. It is a partner in BSc Applied Chemistry dual award “3+1” degree programme run jointly with NUIST (Nanjing University of Science and Technology) where students come to Reading to study the last year of their degree.

Distance learning courses include all MChem degrees (with a year in industry when students follow reduced versions of some Part III modules).

The department runs a small masters course - the MSc in Chemical Research – which is part taught, but mostly research, and can lead into a PhD.

Interdisciplinary teaching requiring support include: analytical biosciences, geochemistry, industrial chemistry, medicinal chemistry, biochemistry, forensic analysis, chemistry education and food analysis ('shared' with soil science, biological sciences, food biosciences and Institute of Education subject areas).

Current holdings

Most materials fall into the 540 section of the classification, but some additional material is found in sections relating to geochemistry, chemical technology, environmental sciences and food. For more detail see the Chemistry libguide:
http://libguides.reading.ac.uk/chemistry

Books and e-books

The collection of books in the University Library 540 section continues to grow despite problems with book budgets over recent years. Other sections of related interest include food chemistry; materials science; environmental chemistry; chemical engineering and technology; geochemistry and atmospheric chemistry. There are also substantial numbers of titles on spectrometry and spectroscopy in physics and other sections, and substantial collections in biochemistry, medicinal chemistry and physics which support the work of some chemists. The Library has also invested in e-books of many core textbooks and will continue to do so where this is affordable. Where relevant the Library will also invest in some skills texts to support students' academic development.

Multimedia

The Library does not actively collect multimedia materials relevant to this subject area.

Journals and e-journals

Chemistry has moved to online subscriptions of current periodicals. There are some significantly long print runs of key chemistry titles and some useful collections of dead or cancelled titles, including some German material.

The Library subscribes to the ACS (American Chemical Society) Journals and Magazines online package including the archive, RSC (Royal Society of Chemistry) Journals package including the archive, ScienceDirect (several of the most heavily used titles in this collection are chemistry titles). The Library has also invested in several large journal packages in recent years which have boosted the number of chemistry titles available to students and researchers.

Reference materials – print and electronic (inc bibliographic databases)

There is a substantial chemistry section in the reference collection. Low cost reference works are bought and some handbooks kept current. The more expensive, multi-volume dictionaries and supplements are not acquired. The Library has subscriptions to a number of online reference packages including Oxford Reference Online Premium, and Credo Reference – these give access to specialist reference materials, including substantial articles and reputable web pages as well more general works and are useful to taught students.

The Library subscribes to several electronic databases (offering links to the full text of those journal articles which we are entitled to access) including Web of Science (which is heavily used by chemists) and the following subject specific services:

- Reaxys including the Beilstein and Gmelin databases part-funded by the Library and Chemistry
- SciFinder Scholar – web version unlimited use; contributions to its cost are made by other Schools and the Library's electronic resources budget

Back runs are held of: *Chemical Abstracts* (1920-2004, lacking the 13th Collective Index); *Beilstein*; *Gmelin*; *Landolt-Bornstein Zahlenwerte und Funktionen aus Naturwissenschaften und Technik*.

Strengths, exclusions and areas for development

The University Library collection is strong in undergraduate texts partly because comparatively few titles are needed in the first two years. There are good general collections in organic and inorganic chemistry, spectroscopy, catalysis and environmental chemistry. Undergraduate project work is also usually adequately resourced with occasional need for Inter-Library Loans. Research interests are served largely through periodicals whether held at Reading or elsewhere. Long runs of periodicals dating back to the turn of the century and earlier and the RSC and ACS archives are strengths of our collection though there is room for development in the "omics" and mass spectrometry. On-line access to earlier years of the Elsevier journals (pre-1995) would also be useful.

There is also a strong collection in science and technology education which are of use to the BSC Chemistry with Education students.

Foreign language material is rarely bought. Older materials are rarely added to stock, though some conference proceedings may be. In some areas such as synthesis older materials are retained.

Forensic science; (bio)analytical chemistry; and medicinal chemistry are areas in need of development; as are journals in the field of polymer science supporting Mathematical research too. Provision of reference material is reasonable, but lacks some expensive works. New editions of big dictionaries (e.g. *Dictionary of inorganic chemistry* and *Dictionary of organic chemistry*) are not acquired, and some material is in need of updating, e.g. supplements to the *Dictionary of organic compounds*. Databases such as SciFinder Scholar, other electronic resources, and suppliers' web sites are used as acceptable alternatives.

Collecting level

The book collections principally serve the teaching requirements of the undergraduate courses. Undergraduates doing dissertations find much of the material they need in the Library but are also are supported by Inter-Library loans and are encouraged to use other libraries.

Alternative access

Inter-library loans

Students are given the opportunity to make use of the Inter-Library Loans service to find information on topics not covered by the Library's collections. Undergraduate students require a tutor's authorisation to confirm requested items are required for study. Staff and

research postgraduates order inter-library loans directly. Such items are often delivered electronically.

Use of other libraries

Members of academic staff and MA and PhD students regularly use the Royal Society of Chemistry LIC (The Department is a corporate member of RSC); the Radcliffe Science Library, Oxford University; the Chemical Database Server at Daresbury; and the Cambridge Structural Database.

Selection, acquisition and stock editing

See the General Collection Development Statement for general principles.

For undergraduate studies, texts in English are the norm. Research level materials in German are rarely acquired though existing resources are sometimes used.

Donations of older materials are not usually accepted.

Reference materials are purchased from the 2nd floor reference fund and from packages put together from a variety of funds including School contributions.

Where possible, little used secondary material in foreign languages and non-academic titles will be withdrawn when space pressures require it. Duplicates which are little used and superseded editions will generally be withdrawn, though it is sometimes the case that the previous edition is kept in multiple copies to satisfy peak demand.

E-books are seen as acceptable additional resources for taught courses rather than replacements and the format of research texts should be considered on a title by title basis.

Policy written by Rosie Higman, Chemistry Liaison Librarian, July 2015