# Chemistry

Purpose: The Chemistry collection supports teaching and research through the doctoral level with specialties in inorganic chemistry, analytical chemistry, environmental chemistry, materials chemistry, nuclear chemistry, organic chemistry, physical chemistry, chemistry of biological systems, and biochemistry. While interest in these areas is concentrated in the Department of Chemistry, certain areas are also of interest to students and faculty in other departments such as School of Molecular Biosciences, Chemical Engineering, Health Sciences, Pharmacy, and the Institute of Biological Chemistry.

## General Collection Guidelines:

Languages: English is the primary language of the collection, but works in German, French, Italian, and infrequently Russian, are also purchased. Translations into English are preferred over the original and obtained when available.

Chronological Guidelines: Emphasis is on the present. Highly technical materials relating to the history of chemistry are acquired selectively.

Geographical Guidelines: Not applicable.

Treatment of the Subject: Lower-division textbooks are not generally purchased. Upper division texts and popular works are purchased selectively. Emphasis is on graduate level texts and research material.

Types of Material: Acquisitions are primarily in the form of monographs and serials, but also include dictionaries, directories, abstracts and indexes, encyclopedias, government documents, proceedings; transactions of conferences, technical reports, and microform in any suitable format.

Date of Publication: Emphasis is on the acquisition of current imprints. Retrospective materials may be purchased either in the original, reprint, electronic, or microform depending on availability and cost.

Other General Considerations: Geochemistry: See: Geology

## Observations and Qualifications by Subject with Collection Level:

Analytical Chemistry: C(1) / B

Classical qualitative and quantitative methods including micro- and ultra-micro-chemical methods; electrochemical methods including voltammetry, polarography, potentionetry, coulmetry; spectroscopic methods including ultraviolet, electron spin resonance, mass spectrometry, flame, atomic absorption and emission; thermometric methods; x-ray diffraction; polarimetry, separation science, combined methods-mass spectrometry, liquid chromatography, gas chromatography; radio chemistry; and optical rotary dispersion.

Environmental Chemistry: C(1) / B

Inorganic Chemistry: C(1) / B

Chemistry of the elements and their compounds, including complex inorganic salts, organometallic/organometalloid components, molecular spectroscopy, and metalloenzymes.

Organic Chemistry: C(1) / B

Includes synthetic methods and laboratory techniques; bio-organic, physical organic; classes of compounds such as aliphatic, condensed and noncondensed aromatic, steroids, carbohydrates, alicyclic, heterocyclic, terpenoids; nuclear magnetic resonance.

Physical and Theoretical Chemistry: C(1) / B

Includes quantum chemistry, solid state and materials chemistry, surface chemistry, thermochemistry and colloids, electrochemistry, magnetochemistry, photochemistry, laser chemistry, nanosystems, nanoporous polymers.

Organometallic Chemistry: C(1) / B

Includes synthesis, physical properties and chemical reactivity of organometallic compounds; transition metal and main-group organometic compounds; homogeneous and heterogeneous catalysis; novel polymer systems.

Crystallography: C(1) / B

Includes geometrical and mathematical crystallography; mechanical, thermal, electric, magnetic, and optical properties; determination of crystal structures.

Biochemistry: C(1) / B

Includes biochemical methods and interactions, biological systems, enzyme systems, natural products, nutrition, mammalian and non-mammalian biochemistry.

See also:

Biological Chemistry/Biophysics

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