

Macromolecular Science & Engineering

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Subject Page: <http://researchguides.case.edu>

I. Purpose:

The primary purpose is to support the research and teaching activities of the Department of Macromolecular Science & Engineering. Macromolecular Science and engineering is the study of the synthesis, structure, processing, and properties of polymers. The Department of Macromolecular Science and Engineering offers programs that result in a Bachelor of Science in Engineering, Master of Science, and Doctor of Philosophy. Publications in the field of macromolecular science are of interest not only to macromolecular scientists and engineers but also to researchers and students in a wide variety of disciplines, such as chemistry, chemical engineering, biomedical engineering, etc.

II. General Collection Guidelines:

A. Languages: English is the primary language of collection. Other languages may be considered with emphasis towards English translations.

B. Chronological Guidelines: Books and journals of current teaching and research interests are the primary focus. Retrospective collecting may occur at the request of a new faculty member or by a faculty member with a new research area.

C. Geographical Guidelines: There are no specific geographical limits of coverage, but primary focus would be North America.

D. Treatment of Subject: Selective acquisition of lower and upper division textbooks, laboratory manuals, introductory works and popular materials.

E. Types of Materials: Includes selective acquisition of treatises, encyclopedias, atlases, dictionaries, directories, abstracts, handbooks, and the proceedings and transactions of conferences and symposia. Theses and dissertations from other institutions and audio-visual material generally are excluded. All formats of materials will be considered, while prominence may be placed on electronic resources or OhioLINK offerings.

Journals are collected in both print and electronic formats.

F. Dates of Publication: Emphasis is on current works with retrospective materials purchased selectively.

G. Deselection: Since the collection is considered a research collection, deselection is done with great care. Special consideration is given to the relevance of older materials to the study of the history of science. Older or fragile materials that cannot be deselected are considered for relocation to remote storage.

H. Cooperative and Related Collections: Case is a founding member of OhioLINK, the Ohio Library and Information Network. OhioLINK is a statewide consortium of public and private colleges and universities, the State Library of Ohio, and technical and community colleges supporting a combined central catalog of statewide holdings, selected online indexes, full-text databases, reference tools, ebooks, & image collections. OhioLINK's goal is to provide easy access to information and rapid delivery of library materials throughout the state. Collection development decisions regarding shared electronic resources are made through the OhioLINK Cooperative Information Resources Management (CIRM) Committee. Additional collaboration on collection management may occur with other centers or libraries, as needed.

I. Other General Considerations: The major areas of research in the Department of Macromolecular Science & Engineering include synthesis, physical characterization, mechanical behavior and analysis, processing, materials development and design, and biopolymers.

J. Electronic Resources: Additional considerations are put into the electronic resources and databases that support the research of this department. To see the Macromolecular Science & Engineering specific databases, proceed to <http://library.case.edu/databases/rdbindex.aspx?subject=318|419>.

III. Observations and Qualifications by Subject and LC Class:

CDP Levels:

A. Minimal Level: Indicates that only highly selective purchases-- usually materials either for reference use, general interest, or for the support of a very specific research need--will be made.

B. Instructional Level: Indicates that standard works and selected current works will be required to support undergraduate and most graduate instruction or sustained independent study. This will include reference and fundamental bibliographic tools pertaining to the subject and a selection of representative journals. Retrospective purchasing is usually limited to standard works.

C. General Research Level: Indicates that the library will acquire most of the materials required to support research through the doctoral degree level and the general research needs of the faculty. Allows for retrospective purchasing depending upon the characteristics and needs of the individual disciplines and their state of development in the collection.

D. Comprehensive Level: Indicates that all currently-published relevant material will be acquired. Involves extensive programs of retrospective purchasing and searching for lacunae.

E. Intensive Level: Indicates the library will strive to acquire all appropriate current and retrospective written or recorded materials in all languages, editions, translations, and formats; manuscripts and other archival materials are acquired extensively. This level is appropriate for the creation or maintenance of a collection serving as a national bibliographic resource.

Subject	LC Class	Location	CDP Collecting Level	Collection Manager	Collection Notes
<p>Polymers and Polymer Manufacture: Includes periodicals, societies, congresses, general works, popular works, juvenile works, handbooks, and tables.</p>	TP 1080-1092	KSL	B	Brian C. Gray	<p>Also see the Chemistry and Chemical Engineering Collection Management Policies.</p> <p>See other Engineering Collection Management Policies for polymer applications in other disciplines.</p>
<p>Plastics: Includes periodicals, societies, yearbooks, congress, exhibitions, general works, collected works, dictionaries, encyclopedias, directories, patents, history, biography, popular works, juvenile works, study & teaching, handbooks, manuals, tables, and catalogs.</p>	TP 1101-1132	KSL	B	Brian C. Gray	
<p>Plastics: Includes plants & equipment, technical chemistry of plastics (analysis), additives,</p>	TP 1135-1148	KSL	C	Brian C. Gray	

handling, packing, and safety measures.					
Plastics – Technical Processes: Includes molding & casting, machining & cutting, welding, joining & bonding, finishing & decorating, calendaring, extrusion, metal coating, mixing, pultrusion, recycling, and spraying with plastics.	TP 1150-1175	KSL	C	Brian C. Gray	
Reinforced & Special Plastics	TP 1177-1180	KSL	C	Brian C. Gray	
Special Forms	TP 1183	KSL	A	Brian C. Gray	
Special Products	TP 1185	KSL	A	Brian C. Gray	
Related Subject Area: Polymerization (Chemistry)	QD 281 .P6	KSL	-	Shu Guo (Chemistry)	See the Chemistry Collection Management Policy.
Related Subject Area: Polymers & Macromolecules	QD 380-388	KSL	-	Shu Guo (Chemistry)	See the Chemistry Collection Management Policy.
Related Subject: Engineering Materials – Plastics and Polymers	TA 455 .P5+	KSL	-	Brian C. Gray	See the Materials Science & Engineering Collection Management Policy.
Related Subject: Structural Engineering - Plastics Construction	TA 668	KSL	-	Brian C.	See the Civil Engineering Collection Management Policy.
Related Subject Area: Machine Tools & Machining - Materials used in Machine & Hand	TJ 1194	KSL	-	Brian C. Gray	See the Mechanical & Aerospace Engineering



Tools - Plastics					Collection Management Policy. Similar applications of plastics could be found in all the engineering subjects areas.
Related Subject: Polymerization (Chemical Engineering)	TP 156 .P6	KSL	-	Brian C. Gray	See the Chemical Engineering Collection Management Policy.
Related Subject Area: Manufacturing - Synthetic Rubber & Elastomers	TS 1925	KSL	A	Brian C. Gray	Collected by request.
Related Subject Area: Manufacturing - Synthetic Textile Fibers	TS 1548.2+	KSL	A	Brian C. Gray	Collected by request.
Applications of Plastics Example: Plastic Craft: Includes plastic foam & furniture.	Example: TT 297	KSL	-	various	Applications of plastics can be found in various subject areas. For example, "plastic craft" would be found under the Social Science Collection Management Policy.

* This document will be reviewed on an annual basis or with significant departmental program changes.