

Physics Research Guide

For more information and reference & research assistance, please contact [Norah Xiao](mailto:nxiao@usc.edu) (nxiao@usc.edu; 213-740-2214; SSL 101)

For general collection holding question, please call the circulation desk at the Science and Engineering Library at (213) 740 8507 or chat on-line at <http://www.usc.edu/libraries/locations/science/>

Books

Printed Books: can be found at 3rd floor of the [Science & Engineering](#) Library or in the [Grand Avenue](#) Library (off-site storage library). Please search [HOMER](#) USC Libraries (UPC campus) catalog for detailed information, e.g. call number and holding. The general call number for Astronomy is QB and Physics is QC.

E-books can be found in the following e-books packages. Please search your interested subjects in these e-books databases.

- NASA [Astrophysics Data System](#) (ADS) Virtual Library
- [eBrary](#) - a reader software needed installing before using
- [NetLibrary](#)
- [Safari Technical Books](#)
- [Springer Book Series](#)

References

Printed reference books can be found at the 1st floor of the [Science & Engineering](#) Library. Please search [HOMER](#) for your interested titles.

E-references

USC owned e-references (off-campus access via [ProxyServer](#))

- [AccessScience](#) - McGraw-Hill's Encyclopedia of Science & Technology online access
- [Britannica Online Academic Edition](#)
- [CRC Handbook of Chemistry and Physics](#) – 2 seats available for current subscription
- [Encyclopedia of Astronomy & Astrophysics](#)
- [ENGnetBASE](#) - comprehensive e-reference collections (over 700 handbooks and references titles) for all engineering areas
- [Landolt-Börnstein Substance / Property Index](#)
 - **Group I Elementary Particles, Nuclei and Atoms**
 - **Group II Molecules and Radicals**
 - **Group III Condensed Matter**
 - **Group IV Physical Chemistry**
 - **Group V Geophysics**
 - **Group VI Astronomy and Astrophysics**
 - **Group VII Biophysics**
 - **Group VIII Advanced Materials and Technologies**
- [Merriam Webster's Collegiate Dictionary](#)
- [Oxford English Dictionary](#) and [Oxford Reference Online: Premium](#)

Internet E-references

- [Astro-Physical Calculator](#)
- [Fundamental Constants by NIST and CODATA](#)
- [Glossary of Nuclear Science Terms](#)
- [Key Values for Thermodynamics](#) by CODATA
- [NIST data gateway](#)
 - [Atomic Spectra Databases](#) (ASD) by NIST

Research Databases

USC subscribed research databases (off-campus access via [ProxyServer](#))

- [ACM Digital Library](#)
Full-text primary literature of computing and computer science published by Association for Computing Machinery (ACM); from 1954 to present
- [Aerospace & High Technology Database \(Full archive\)](#)
Primary literature (journals, reports issued by NASA, and other U.S. government agencies) in aeronautics, astronautics, space sciences, chemistry, geosciences, physics, communications, and electronics; approximately from 1962 to present; updated monthly
- AIAA electronic library – only for [American Institute of Aeronautics and Astronautics Publications](#) journals from 1997 to current
- [Annual Reviews](#) in
 - [Astronomy and Astrophysics](#)
 - [Biophysics](#)
 - [Nuclear and Particle Science](#)
 - [Physical Chemistry](#)
- [Applied Science and Technology \(AST\) Full Text \(Wilson OmniFile\)](#)
Chemistry, Computer Technology, data processing, energy-related disciplines, Engineering, Mathematics and Physics
- [arXiv Preprints](#)
- [CERN Document Server \(CDS\)](#)
Abstracts (and full-text) of literature in particle physics and related areas
- [Compendex](#) (via [Engineering Village 2](#))
Indexes to journals, conferences, technical reports of engineering and applied science; from 1969 to present; updated weekly
- [CSA Illustrata: Natural Sciences](#)
All science disciplines with searchable tables, figures, graphs, charts and other illustrations from the scholarly research and technical literature from 1997 to present
- [Energy Citations Database](#)
Indexes energy-related literature sponsored by the Department of Energy (DOE) and its predecessors, the Energy Research and Development Administration (ERDA) and the Atomic Energy Commission (AEC); relates to the print equivalent Nuclear Science Abstracts; from 1948 to present
- NASA
 - [High Energy Astrophysics Science Archive Research Center \(HEASARC\)](#)
primary archive for high-energy astronomy missions, in extreme ultraviolet, X-ray and gamma-ray wavelengths
 - [PDS](#) Planetary Data System
- [Xplore \(IEEE Electronic Library\)](#)
Full text IEEE publications (journals and conference proceedings) and over 900 IEEE standards; from 1988 to present (some content back to 1950's)

- [INSPEC](#) (via [Engineering Village 2](#))
Abstracts of scientific literature in electrical engineering, electronics, physics, control engineering, information technology, communications, computers, computing, and manufacturing and production engineering; from 1969 to present; updated weekly
- [MathSciNet](#)
Indexes of mathematical research literature published in the Mathematical Reviews; from 1940 to present
- MDL Crossfire (online access to Beilstein & Gmelin handbooks, contact [Norah Xiao](#) for more information)
- [SAO/NASA Astrophysics Data System \(ADS\) Abstract Service](#)
The Digital Library for physics and astronomy funded by NASA and supported by Stanford University; search primary literature in [Astronomy and Astrophysics](#) , [Physics and Geophysics](#), [arXiv Preprints](#), [Science Education](#)
- [SPIE Digital Library](#)
Optical engineering and science (optics and photonics); full-text technical reports, SPIE journals and conference proceedings; from 1990 to the present.
- [Web of Knowledge \(Web of Science\)](#)
Includes Science Citation Index and Journal Citation Reports and Essential Science Indicators databases

Journals

By associations, publishers, and others

- [American Institute of Physics \(AIP\)](#)
 - [Scitation](#) Home of 100+ physics and engineering journals, hosted by AIP
- [American Physical Society](#)
 - [PROLA - Physical Review Online Archive](#)
- [ApJ/ApJL/ApJS Preprints](#)
- [HEP Preprint database](#)
- [Institute of Physics](#) IOP electronic journals [Search](#)
- [Los Alamos technical reports and publications](#)
- [NASA Astrophysics Data System \(ADS\) Abstract Service](#)
The Digital Library for physics and astronomy funded by NASA and supported by Stanford University; search primary literature in [Astronomy and Astrophysics](#) , [Physics and Geophysics](#), [arXiv Preprints](#), [Science Education](#)
- [Nature Open Access](#)
- [NRAO RAPSsheet](#): Reprints received in the NRAO Charlottesville library from 1986 forward
- [STScI STEPsheet](#)

USC journal subscriptions in relevant subject areas (off-campus access via [ProxyServer](#))

Astronomy & Astrophysics

- [Astronomical Observatories & Instruments \(5\)](#)
- [Astronomy - General \(70\)](#)
- [Astrophysics \(22\)](#)
- [Practical & Spherical Astronomy \(1\)](#)
- [Theoretical Astronomy \(1\)](#)

Physics

- [Acoustics & Sound \(18\)](#)
- [Atomic Physics \(59\)](#)
- [Cosmic Physics \(22\)](#)
- [Electricity & Magnetism \(52\)](#)
- [Light & Optics \(76\)](#)
- [Nuclear Physics \(69\)](#)
- [Physics - General \(235\)](#)
- [Thermodynamics \(8\)](#)
- [Weights & Measures \(8\)](#)

[Patent](#)

[Grey Literature](#)

Professional Societies and Institutions*Astronomy*

- [American Astronomical Society](#) (AAS)
- [European Organisation for Astronomical Research](#) in the Southern Hemisphere (ESO)
- [International Astronomical Union](#) (IAU)

Physics

- [American Institute of Physics](#) (AIP)
- [American Physical Society](#) (APS)
- [CERN](#) (European Organisation for Nuclear Research)
- [European Physical Society](#) (EPS)
- [Federal R&D project summaries](#)
- [Institute of Physics](#) (IoP)
- [International Union of Pure and Applied Physics](#) (IUPAP)
- [International Association of Mathematical Physics](#)
- [International Centre for Theoretical Physics](#)
- [American Association for Physicists in Medicine](#)
- [Max-Planck-Institut für Plasmaphysik](#) (IPP)
- [Physics Departments Worldwide](#)
- [US Department of Energy](#) (DOE)
 - [DOE National Labs and Offices](#)
- [US National Institute for Standards and Technology](#) (NIST)
- [US National Science Foundation](#) (NSF)
- Lists of Physics Organizations and Associations:
 - [Directory of Physics Associations](#) (from Google)
 - [Directory of Minority Groups in Physics](#) (from APS)
 - [Scholarly Societies List - Physics](#) (University of Waterloo)