SciTech XML Data Service
Query Parameters and Options

About

SciTech Connect is a portal to free, publicly-available DOE-sponsored R&D results including technical reports, bibliographic citations, journal articles, conference papers, books, multimedia and data information. SciTech Connect is a consolidation of two core DOE search engines, the Information Bridge and the Energy Citations Database. SciTech Connect incorporates all of the R&D information from these two products into one search interface. SciTech Connect was developed by the U.S. Department of Energy (DOE) Office of Scientific and Technical Information (OSTI) to increase access to science, technology, and engineering research information from DOE and its predecessor agencies.

Several XML data services are currently available from OSTI collections. This service searches SciTech Connect data.

The examples provided in this document were copied from XML results in Microsoft Internet Explorer. Results may appear slightly different in other browser windows.

Getting Started

The XML data service is available from the URL listed below.

Data Service Name	*XML Data Service URL*
SciTech Connect Data	http://www.osti.gov/scitech/scitechxml

This service accepts the parameters discussed below.

Using the XML Data Services

The parameters for each service are: ?CriteriaKeyword= where CriteriaKeyword is replaced by one of the criteria keywords listed below. A blank query will return the entire result set for the given XML Service. The maximum number of records returned per page is 3000. **Please note that criteria keywords are case-sensitive and must be entered as shown in the table below**.

Criteria Keyword	*Data/Field Searched*
searchFor	by all metadata fields and full text
osti_id	by the unique OSTI Identifier assigned to a record
FullText	by document full text only
Biblio	by all bibliographic metadata fields (Title, Author, Subject, etc.) only
Author	by author/creators
Title	by document titles
Subject	by document keywords/subject
Identifier	by document identifying numbers (e.g., report number.)
SponsorOrg	by Sponsoring Organization (e.g. USDOE)
ResearchOrg	by Originating Research Organization
Type	by publication type (e.g., Book, Conference, Technical Report, Dataset etc.) (case specific)
PubDateFrom	limit results to documents published after the specified date (in MM/DD/YYYY format)
PubDateTo	limit results to documents published before the specified date (in MM/DD/YYYY format)
EntryDateFrom	limit results to documents entered or updated after the specified date (in MM/DD/YYYY format)
EntryDateTo	limit results to documents entered or updated before the specified date (in MM/DD/YYYY format)
AddDateFrom	limit results to documents added or updated after the specified date (in MM/DD/YYYY format)
AddDateTo	limit results to documents added or updated before the specified date (in MM/DD/YYYY format)
Conference	by conference title (searches combined “relation” metadata field)
Journal	by journal title (searches combined “relation” metadata field)
Patent	by patent (searches combined “relation” metadata field)
Language	by language
FullTextOnly	any non-empty value = limit results to documents with full text data

FullTextMatch	1 = limit results to documents with full text data, 0 = limit results to documents without full text data
Country	by publication country

Criteria Keyword	*Data/Field Searched*
EndPubYear, EndPubMonth, EndPubDay	if provided a minimum of EndPubYear, limit results to documents published before the specified date
StartSysYear, StartSysMonth, StartSysDay	if provided a minimum of StartSysYear, limit results to documents updated after the specified date
EndSysYear, EndSysMonth, EndSysDay	if provided a minimum of EndSysYear, limit results to documents updated before the specified date
StartAddYear, StartAddMonth, StartAddDay	if provided a minimum of StartAddYear, limit results to documents added after the specified date
EndAddYear, EndAddMonth, EndAddDay	if provided a minimum of EndAddYear, limit results to documents added before the specified date

Example

The URL for a search on “geodesy” in all fields of SciTech Connect data would be:

http://www.osti.gov/scitech/scitechxml?searchFor=geodesy

The results would look similar to the example record below.

<record rownumber="2">
<dc:title>Active tectonics of northwestern U.S. inferred from GPS-derived surface velocities</dc:title>
<dc:creator>Robert McCaffrey; Robert W. King; Suzette J. Payne; Matthew Lancaster</dc:creator>
<dc:subject>99 GENERAL AND MISCELLANEOUS Continental margins; Continental neotectonics; convergent; North America; Satellite geodesy: results; Space geodetic surveys; Tectonic deformation</dc:subject>
<dc:subjectRelated>Continental margins; Continental neotectonics; convergent; North America; Satellite geodesy: results; Space geodetic surveys; Tectonic deformation</dc:subjectRelated>
<dc:description>Surface velocities derived from GPS observations from 1993 to 2011 at several hundred sites across the deforming northwestern United States are used to further elucidate the region's active tectonics. The new velocities reveal that the clockwise rotations, relative to North America, seen in Oregon and western Washington from earlier GPS observations, continue to the east to include the Snake River Plain of Idaho and south into the Basin and Range of northern Nevada. Regional-scale rotation is attributed to gravitationally driven extension in the Basin and Range and Pacific-North America shear transferred through the Walker Lane belt aided by potentially strong pinning below the Idaho Batholith. The large rotating section comprising eastern Oregon displays very low internal deformation rates despite seismological evidence for a thin crust, warm mantle, organized mantle flow, and elevated topography. The observed disparity between mantle and surface kinematics suggests that either little stress acts between them (low basal shear) or that the crust is strong relative to the mantle. The rotation of the Oregon block impinges on Washington across the Yakima fold-thrust belt where shortening occurs in a closing-fan style. Elastic fault locking at the Cascadia subduction zone is reevaluated using the GPS velocities and recently published uplift rates. The 18 year GPS and 80 year leveling data can both be matched with a common locking model suggesting that the locking has been stable over many decades. The rate of strain accumulation is consistent with hundreds of years between great subduction events.</dc:description>
<dcq:publisher/>
<dcq:publisherAvailability/>
<dcq:publisherResearch>Idaho National Laboratory (INL)</dcq:publisherResearch>
<dcq:publisherSponsor>USDOE</dcq:publisherSponsor>
<dcq:publisherCountry>United States</dcq:publisherCountry>
<dc:date>2013-02-01</dc:date>
<dc:language>English</dc:language>
<dc:type>Journal Article</dc:type>
<dcq:typeQualifier/>
<dc:relation>Journal Name: Journal of Geophysical Research: Solid Earth; Journal Volume: 118; Journal Issue: 2</dc:relation>

Wildcards

Queries using wildcard operators can be performed. The asterisk (*) is used to search for words with spelling variations or contain a specified pattern of characters.

Example

The following URL will return all the items with “sustain” and any words with “sustain” as a stem in the title.

http://www.osti.gov/scitech/scitechxml?Title=sustain*

The following truncated results are returned.

<dc:title>Investigation of thermochemical biorefinery sizing and environmental sustainability impacts for conventional supply system and distributed pre-processing supply system designs</dc:title>

<dc:title>Supply Chain Sustainability Analysis of Three Biofuel Pathways. Biochemical Conversion of Corn Stover to Ethanol Indirect Gasification of Southern Pine to Ethanol Pyrolysis of Hybrid Poplar to Hydrocarbon Fuels</dc:title>

<dc:title>Investigation of Thermochemical Biorefinery Sizing and Environmental Sustainability Impacts for Conventional Supply System and Distributed Pre-Processing Supply System Designs</dc:title>

<dc:title>Sustained active site rigidity during synthesis by human DNA polymerase [mu]</dc:title>

Multiple Search Terms

Multiple search terms and terms that require spaces can be separated by the plus symbol (+) or using the Boolean AND operator.

Example

The URL for a search for “particle” and “accelerator” would be:

http://www.osti.gov/scitech/scitechxml?searchFor=particle+accelerator

or:

http://www.osti.gov/scitech/scitechxml?searchFor=particle%20AND%20accelerator

The characters, %20, must be added before and after the AND operator.

The following truncated results are returned.

```
<?xml version="1.0" encoding="UTF-8" ?>
- <rdf:RDF xmlns:dc="http://purl.org/dc/elements/1.1/"
    xmlns:dcq="http://purl.org/dc/terms/"
    xmlns:rdf="http://www.w3.org/1999/02/22-rdf- syntax-ns#">
- <records queryid="0" count="29014" morepages="true" start="1" end="100">
- <record rownumber="1">
<dc:title>Particle-beam fusion research facilities at Sandia National Laboratories</dc:title>
<dc:creator>NONE</dc:creator>
<dc:subject>70 PLASMA PHYSICS AND FUSION; INERTIAL CONFINEMENT; PARTICLE BEAM
  FUSION ACCELERATOR; ION BEAMS; ELECTRON BEAMS; X-RAY SOURCES; BEAM
  PRODUCTION; INERTIAL FUSION DRIVERS</dc:subject>
<dc:subjectRelated />
<dc:description>Sandia research in inertial-confinement fusion (ICF) is based on pulse- power
  capabilities that grew out of earlier developments of intense relativistic electron- beam (e-
  beam) radiation sources for weapon effects studies. ICF involves irradiating a deuterium-
  tritium pellet with either laser light or particle beams until the center of the pellet is
  compressed and heated to the point of nuclear fusion. This publication focuses on the use
  of particle beams to achieve fusion, and on the various facilities that are used in support of
  the particle-beam fusion (PBF) program.</dc:description>
```

Searches using the Boolean OR operator can also be performed, retrieving records with one search term or the other.

Example

The URL for a search for “particle” or “accelerator” would be:

http://www.osti.gov/scitech/scitechxml?searchFor=particle%20OR%20accelerator

Like the AND operator, the characters, %20, must be added before and after the OR operator.

Exact Phrase Search

Exact phrases can be searched by surrounding the search terms in double quotation marks (“ ”).

Example

The following URL searches records containing the exact phrase “particle accelerator” in the title.
http://www.osti.gov/scitech/scitechxml?Title=“particle accelerator”

The following truncated results are returned.

```
<dc:title>Laser Particle Accelerator Program</dc:title>

<dc:title>Particle-accelerator decommissioning</dc:title>

<dc:title>An active particle accelerator</dc:title>

<dc:title>Automation of particle accelerator control</dc:title>
```

Search Options

The default number of results per page is 100 and the maximum number of records returned per page is 3000.

The following table lists various search options that can be used to sort results.

Additional Criteria Keywords	*Search Option*
SortBy	Sort results by a field name. Valid field names include: publication_date, creator, title, date_entry, publisher_sponsor, publisher_research, and relv (relevance score). By default, searches are sorted by relevance.
SortOrder	Selects the direction of the sort, either ASC (ascending) or DESC (descending). The default is DESC.
nrows	Indicates the number of records desired per page of results.
page	Request a particular page of search results. The first page of results is returned by default.
format	xml (or blank) = output in xml format, csv = output in csv format

One or more search options may be specified in the URL. Specify each as with search criteria, separated by ampersands ("&"). The number of desired results per page and an option to request additional pages of information may also be specified.

Sorting

Results may be sorted by a number of specifications including: publication_date, creator, title, date_entry, and relv (relevance). Results can be sorted either in ascending (ASC) or descending (DESC) order. Results are sorted in descending order by default.

Example

The URL for a SciTech data search for the exact phrase "particle accelerator" in the full text field sorted by the date of publication would be:

http://www.osti.gov/scitech/scitechxml?Title="particle accelerator"&SortBy=publication_date

By default, results are sorted by relevance. While relevance sorting is helpful in some circumstances, sorting results by publication date might be more helpful in most other situations. This ensures the results viewed first are the most up-to-date records.

Requesting Additional Pages

By default, a search request returns the first page of results if additional pages are available. The page search option can return multiple pages of search results. The maximum records per page returned are 3000; to access additional records use the page parameter. **Please note that the page count begins at zero (0).**

Example

The second page of results for a search on plasma can be obtained with the following URL.
http://www.osti.gov/scitech/scitechxml?searchFor=plasma&page=2

The number of records (count), starting record, and end record are found near the top of the XML results.

```
- <records queryid="0"  count="17771  morepages="true"  start="101"  end="200"  >
```

The "morepages" tag indicates whether or not additional pages for a specific search are available. If additional pages are available, then the tag reads: morepages="**true**". If additional pages are not available, then the tag reads: morepages="**false**".

Additional Formats

Results may be returned in Comma-Separated Values (CSV) format by using the "format" parameter.

Example

The URL for a SciTech data search for the exact phrase "sustainable development" in the full text field retuned in CSV format would be:

http://www.osti.gov/scitech/scitechxml?Title=%22carbon%20fiber%22&format=csv

Helpful Tips

By default, results are sorted by relevance. While relevance sorting is helpful in some circumstances, sorting results by publication date might be more helpful in most other situations. This ensures the results viewed first are the most up-to-date records.

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