

# Package: zoteR (via r-universe)

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**Title** R Interface to 'Zotero' via Better BibTeX

**Version** 1.0.0

**Description** Connects R to 'Zotero' through the 'Better BibTeX' for 'Zotero' connector <<https://retorque.re/zotero-better-bibtex/>>. Provides functions to insert in-text citations and bibliography entries directly into documents, detect citations already present in R Markdown and Quarto files, and synchronise bibliography files. Includes an 'RStudio addin' for interactive use.

**License** GPL (>= 3)

**Encoding** UTF-8

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**Suggests** knitr, rmarkdown

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## Contents

|             |   |
|-------------|---|
| zt_actions  | 2 |
| zt_bib      | 3 |
| zt_bib_cayw | 4 |
| zt_bib_path | 4 |

|                                    |    |
|------------------------------------|----|
| zt_bib_selected . . . . .          | 5  |
| zt_cite . . . . .                  | 6  |
| zt_detect_citations . . . . .      | 6  |
| zt_guess_citation_format . . . . . | 7  |
| zt_guess_format . . . . .          | 8  |
| zt_is_running . . . . .            | 8  |
| zt_knitr_input . . . . .           | 9  |
| zt_libraries . . . . .             | 9  |
| zt_library_id . . . . .            | 10 |
| zt_update_bib . . . . .            | 10 |
| zt_write_bib . . . . .             | 11 |

|              |           |
|--------------|-----------|
| <b>Index</b> | <b>13</b> |
|--------------|-----------|

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|            |   |
|------------|---|
| zt_actions | <i>Handle bibliography or citation text</i> |
|------------|---|

---

## Description

These functions define what happens to the text retrieved from Zotero:

## Usage

```
zt_return(text)
```

```
zt_print(text)
```

```
zt_insert(text)
```

```
zt_copy(text)
```

## Arguments

|      |                     |
|------|---------------------|
| text | A character string. |
|------|---------------------|

## Details

- `zt_return()` returns the text invisibly (useful in scripts).
- `zt_print()` writes the text to the console via `cat()`.
- `zt_insert()` inserts the text at the cursor position in RStudio, falling back to `zt_print()` when RStudio is not available.
- `zt_copy()` copies the text to the system clipboard.

## Value

All functions return text invisibly.

**Examples**

```
zt_print("@doe2020")
zt_return("@doe2020")
```

zt\_bib

*Fetch bibliography data for specific citation keys***Description**

Returns bibliography data for a vector of Better BibTeX citation keys.

**Usage**

```
zt_bib(
  keys,
  format = getOption("zoter.default.format", "biblatex"),
  library_id = getOption("zoter.default.library_id", 1L),
  .action = zt_return
)
```

**Arguments**

|            |   |
|------------|---|
| keys       | A character vector of Better BibTeX citation keys.  |
| format     | Bibliography format. One of "json" (CSL-JSON; recommended), "biblatex", "bibtex", or "yaml" (CSL-YAML). Defaults to the value of <code>getOption("zoter.default.format", "biblatex")</code> . |
| library_id | Integer library ID. Use <code>zt_library_id()</code> to look up the ID by name. Defaults to <code>getOption("zoter.default.library_id", 1L)</code> .  |
| .action    | What to do with the result. One of <code>zt_return()</code> , <code>zt_print()</code> , <code>zt_insert()</code> , or <code>zt_copy()</code> .  |

**Value**

Bibliography text, returned according to `.action`.

**Recommended format**

Use "json" (CSL-JSON) unless you are using a raw TeX citation engine. R Markdown converts other formats to CSL-JSON, and the conversion is lossy for non-article reference types.

**Examples**

```
## Not run:
zt_bib(c("doe2020", "smith2019"), format = "json")

## End(Not run)
```

---

|             |   |
|-------------|---|
| zt_bib_cayw | <i>Fetch a bibliography via cite-as-you-write</i> |
|-------------|---|

---

### Description

Opens the Better BibTeX CAYW picker in Zotero and returns bibliography data for the chosen items in the requested format.

### Usage

```
zt_bib_cayw(
  format = getOption("zoter.default.format", "biblatex"),
  .action = zt_return
)
```

### Arguments

|         |   |
|---------|---|
| format  | Bibliography format. One of "json" (CSL-JSON; recommended), "biblatex", "bibtex", or "yaml" (CSL-YAML). Defaults to the value of <code>getOption("zoter.default.format", "biblatex")</code> . |
| .action | What to do with the result. See <a href="#">zt_return()</a> .   |

### Value

Bibliography text, returned according to `.action`.

### Examples

```
## Not run:
zt_bib_cayw(format = "json", .action = zt_print)

## End(Not run)
```

---

|             |   |
|-------------|---|
| zt_bib_path | <i>Extract the bibliography file path from a document's YAML front matter</i> |
|-------------|---|

---

### Description

Reads the YAML front matter of an R Markdown or Quarto document and returns the value of the bibliography field. Relative paths are resolved relative to the document's directory.

### Usage

```
zt_bib_path(path_doc, encoding = "UTF-8")
```

**Arguments**

path\_doc            Path to an .Rmd or .qmd file.  
 encoding            File encoding passed to `readLines()`.

**Value**

An absolute path to the bibliography file.

---

|                 |   |
|-----------------|---|
| zt_bib_selected | <i>Fetch bibliography for currently selected Zotero items</i> |
|-----------------|---|

---

**Description**

Returns bibliography data for the items currently highlighted in the Zotero window.

**Usage**

```
zt_bib_selected(  
  format = getOption("zoter.default.format", "biblatex"),  
  .action = zt_return  
)
```

**Arguments**

format            Bibliography format. One of "json" (CSL-JSON; recommended), "biblatex", "bibtex", or "yaml" (CSL-YAML). Defaults to the value of `getOption("zoter.default.format", "biblatex")`.

.action            What to do with the result. One of `zt_return()`, `zt_print()`, `zt_insert()`, or `zt_copy()`.

**Value**

Bibliography text, returned according to `.action`.

**Examples**

```
## Not run:  
zt_bib_selected(format = "json", .action = zt_print)  
  
## End(Not run)
```

---

|         |   |
|---------|---|
| zt_cite | <i>Insert a Zotero citation using cite-as-you-write</i> |
|---------|---|

---

### Description

Opens the Better BibTeX cite-as-you-write (CAYW) picker in Zotero and returns or inserts the formatted citation.

### Usage

```
zt_cite(format = c("pandoc", "latex", "cite"), .action = zt_return)
```

### Arguments

|         |  |
|---------|--|
| format  | Citation format. One of "pandoc" (default; produces [key]), "latex" (produces \cite{key}), or "cite" (produces \cite{key} for LaTeX documents).  |
| .action | What to do with the result. One of <code>zt_return()</code> , <code>zt_print()</code> , <code>zt_insert()</code> , or <code>zt_copy()</code> . Defaults to <code>zt_insert()</code> when called from the RStudio addin and <code>zt_return()</code> otherwise. |

### Value

The citation string, returned according to .action.

### Examples

```
## Not run:
# Returns citation string
zt_cite(format = "pandoc", .action = zt_return)

## End(Not run)
```

---

|                     |  |
|---------------------|--|
| zt_detect_citations | <i>Detect pandoc-style citation keys in a document</i> |
|---------------------|--|

---

### Description

Scans one or more files for pandoc-style citation keys (@key) and returns a character vector of unique keys found. Text inside code chunks, inline R expressions, and URLs is intentionally excluded to avoid false positives.

### Usage

```
zt_detect_citations(path = zt_knitr_input())

zt_detect_citations_text(text)
```

**Arguments**

|      |  |
|------|--|
| path | A character vector of file paths to scan. When called inside a knitting session, defaults to <code>zt_knitr_input()</code> . |
| text | A character string of document text (for programmatic use).  |

**Details**

To force a key to appear in the output (e.g. for a reference you mention only in a caption), add it to an HTML comment or to the `nocite` front matter field.

**Value**

A character vector of unique citation keys (without the leading @).

**Examples**

```
tmp <- tempfile(fileext = ".Rmd")
writeLines(c(
  "See [doe2020] and @smith2019.",
  "Not this one: \\@escaped or `r 'inline'`"
), tmp)
zt_detect_citations(tmp)
unlink(tmp)
zt_detect_citations_text("See [doe2020] and @smith2019.")
```

---

zt\_guess\_citation\_format

*Guess the citation format from a file path*

---

**Description**

Returns "latex" for .tex files and "pandoc" for everything else.

**Usage**

```
zt_guess_citation_format(path)
```

**Arguments**

|      |              |
|------|--------------|
| path | A file path. |
|------|--------------|

**Value**

A character string, either "pandoc" or "latex".

**Examples**

```
zt_guess_citation_format("paper.Rmd")
zt_guess_citation_format("paper.tex")
```

---

|                 |  |
|-----------------|--|
| zt_guess_format | <i>Guess the bibliography file format from a file path</i> |
|-----------------|--|

---

**Description**

Inspects the file extension of path and returns the corresponding Better BibTeX translator name.

**Usage**

```
zt_guess_format(path, dot_bib = getOption("zoter.default.bib", "biblatex"))
```

**Arguments**

|         |  |
|---------|--|
| path    | A file path ending in .json, .bib, or .yaml/.yml.  |
| dot_bib | Format to use for .bib files: "biblatex" (default) or "bibtex". Override the default with options(zoter.default.bib = "bibtex"). |

**Value**

A character string: one of "json", "biblatex", "bibtex", or "yaml".

**Examples**

```
zt_guess_format("refs.json")
zt_guess_format("refs.bib")
zt_guess_format("refs.yaml")
```

---

|               |   |
|---------------|---|
| zt_is_running | <i>Check whether the Better BibTeX HTTP endpoint is reachable</i> |
|---------------|---|

---

**Description**

zt\_is\_running() returns TRUE if Zotero is open and the Better BibTeX add-on is active, FALSE otherwise. zt\_assert\_running() throws an informative error if it is not.

**Usage**

```
zt_is_running()

zt_assert_running()
```

**Value**

zt\_is\_running() returns a single logical value. zt\_assert\_running() is called for its side-effect and returns NULL invisibly.

**Examples**

```
zt_is_running()
```

---

|                |  |
|----------------|--|
| zt_knitr_input | <i>Return the current knitr input file</i> |
|----------------|--|

---

**Description**

A thin wrapper around `knitr::current_input()` that throws an informative error when called outside a knitr session.

**Usage**

```
zt_knitr_input()
```

**Value**

The path to the current knitr input file.

---

|              |  |
|--------------|--|
| zt_libraries | <i>List available Zotero libraries</i> |
|--------------|--|

---

**Description**

Returns a data frame with the id and name of all Zotero libraries (personal library and any group libraries) accessible through Better BibTeX.

**Usage**

```
zt_libraries()
```

**Value**

A data frame with columns id (integer) and name (character).

**Examples**

```
## Not run:  
zt_libraries()  
  
## End(Not run)
```

---

|               |  |
|---------------|--|
| zt_library_id | <i>Look up a Zotero library ID by name</i> |
|---------------|--|

---

### Description

Convenience wrapper around `zt_libraries()` that returns the integer ID for a named library. Useful when you need to pass `library_id` to `zt_bib()` or `zt_write_bib()` in a way that is portable across machines (where numeric IDs may differ).

### Usage

```
zt_library_id(name)
```

### Arguments

`name`            A character vector of library names.

### Value

An integer vector of library IDs, the same length as `name`. Returns `NA_integer_` for NA inputs.

### Examples

```
## Not run:
zt_library_id("My Library")

## End(Not run)
```

---

|               |  |
|---------------|--|
| zt_update_bib | <i>Update a bibliography file from an R Markdown / Quarto document</i> |
|---------------|--|

---

### Description

Detects citation keys in `path_doc`, then calls `zt_write_bib()` to refresh the bibliography file declared in the document's YAML front matter (or `path_bib` if supplied explicitly).

### Usage

```
zt_update_bib(
  path_doc,
  path_bib = zt_bib_path(path_doc),
  ignore = character(),
  format = zt_guess_format(path_bib),
  library_id = getOption("zoter.default.library_id", 1L),
  overwrite = TRUE,
  filter = identity,
  quiet = FALSE
)
```

**Arguments**

|            |  |
|------------|--|
| path_doc   | Path to an .Rmd or .qmd file.  |
| path_bib   | Path to the bibliography file to update. Defaults to the path declared in the document's bibliography front matter field, resolved relative to path_doc. |
| ignore     | A character vector of keys to exclude.   |
| format     | Bibliography format (guessed from path_bib by default).  |
| library_id | Integer library ID (see <code>zt_library_id()</code> ).  |
| overwrite  | Passed to <code>zt_write_bib()</code> .  |
| filter     | Passed to <code>zt_write_bib()</code> .  |
| quiet      | Use TRUE to suppress the success message.  |

**Value**

path\_bib, invisibly.

**Examples**

```
## Not run:  
zt_update_bib("paper.Rmd")  
  
## End(Not run)
```

---

|              |  |
|--------------|--|
| zt_write_bib | <i>Write a bibliography file from Zotero citation keys</i> |
|--------------|--|

---

**Description**

Fetches bibliography data for the given keys from Zotero and writes it to path. Intended for use in YAML front matter to keep bibliography files in sync automatically:

**Usage**

```
zt_write_bib(  
  path,  
  keys = zt_detect_citations(),  
  ignore = character(),  
  format = zt_guess_format(path),  
  library_id = getOption("zoter.default.library_id", 1L),  
  overwrite = FALSE,  
  filter = identity  
)
```

## Arguments

|            |  |
|------------|--|
| path       | Path to the output file. The extension determines the default format (.json → "json", .bib → "biblatex", .yaml → "yaml").              |
| keys       | A character vector of citation keys. Defaults to <code>zt_detect_citations()</code> when called inside a knitr session.                |
| ignore     | A character vector of keys to exclude from the output.   |
| format     | Bibliography format. One of "json", "biblatex", "bibtex", or "yaml". Guessed from path by default via <code>zt_guess_format()</code> . |
| library_id | Integer library ID (see <code>zt_library_id()</code> ).  |
| overwrite  | Use TRUE to overwrite an existing file.  |
| filter     | A function applied to the raw bibliography string before writing (e.g. to sort or post-process entries).                               |

## Details

```
bibliography: ``r zoteR::zt_write_bib('refs.json', overwrite = TRUE)``
```

## Value

path, invisibly (for use in YAML front matter).

## Examples

```
## Not run:  
zt_write_bib("refs.json", overwrite = TRUE)  
zt_write_bib("refs.bib", overwrite = TRUE)  
  
## End(Not run)
```

# Index

`cat()`, 2

`knitr::current_input()`, 9

`readLines()`, 5

`zt_actions`, 2

`zt_assert_running(zt_is_running)`, 8

`zt_bib`, 3

`zt_bib()`, 10

`zt_bib_cayw`, 4

`zt_bib_path`, 4

`zt_bib_selected`, 5

`zt_cite`, 6

`zt_copy(zt_actions)`, 2

`zt_copy()`, 3, 5, 6

`zt_detect_citations`, 6

`zt_detect_citations()`, 12

`zt_detect_citations_text`  
(`zt_detect_citations`), 6

`zt_guess_citation_format`, 7

`zt_guess_format`, 8

`zt_guess_format()`, 12

`zt_insert(zt_actions)`, 2

`zt_insert()`, 3, 5, 6

`zt_is_running`, 8

`zt_knitr_input`, 9

`zt_knitr_input()`, 7

`zt_libraries`, 9

`zt_libraries()`, 10

`zt_library_id`, 10

`zt_library_id()`, 3, 11, 12

`zt_print(zt_actions)`, 2

`zt_print()`, 2, 3, 5, 6

`zt_return(zt_actions)`, 2

`zt_return()`, 3–6

`zt_update_bib`, 10

`zt_write_bib`, 11

`zt_write_bib()`, 10, 11