

# Package ‘rxylib’

June 29, 2017

**Type** Package

**Title** Import XY-Data into R

**Description** Provides access to the 'xylib' C library for to import xy data from powder diffraction, spectroscopy and other experimental methods.

**Version** 0.1.0

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**URL** <https://github.com/R-Lum/rxylib>

**BugReports** <https://github.com/R-Lum/rxylib/issues>

**License** GPL-3 | LGPL-2.1

**Depends** R (>= 3.4.0), utils

**Imports** Rcpp (>= 0.12.11), stringr (>= 1.2.0), httr (>= 1.2.1)

**Suggests** testthat (>= 1.0.2)

**LinkingTo** Rcpp (>= 0.12.11), BH (>= 1.62.0-1)

**Encoding** UTF-8

**Collate** 'rxylib.R' 'RcppExports.R' 'read\_xyData.R'

**RoxygenNote** 6.0.1

**NeedsCompilation** yes

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rxylib-package

*Import XY-Data into R***Description**

Provides access to the 'xylib' C library for to import xy data from powder diffraction, spectroscopy and other experimental methods.

Package: rxylib  
 Type: Package  
 Version: 0.1.0  
 Date: 2017-06-30  
 License: GPL-3

**Details**

Currently the package uses 'xylib' version 1.6 (unreleased).

Supported data formats

ID	NAME	DESCRIPTION	FILE EXTENSION
[1,]	cpi	Sietronics Sieray CPI	cpi
[2,]	uxd	Bruker Diffrac-AT UXD	uxd
[3,]	rigaku_dat	Rigaku DAT	dat
[4,]	bruker_raw	Siemens/Bruker RAW	raw
[5,]	vamas	VAMAS ISO-14976	vms
[6,]	philips_udf	Philips UDF	udf
[7,]	spe	PI WinSpec SPE	spe
[8,]	pdCIF	Powder Diffraction CIF	cif
[9,]	philips_rd	Philips PC-APD RD/SD	rd sd
[10,]	xrdml	PANalytical XRDML	xrdml
[11,]	canberra_mca	Canberra MCA	mca dat
[12,]	canberra_cnf	Canberra CNF	cnf
[13,]	xfit_xdd	XFIT XDD	xdd
[14,]	riet7	RIET7/LHPM/PSI_DMC	dat
[15,]	dbws	DBWS data	dbw rit neu
[16,]	chiplot	ChiPLOT data	chi
[17,]	spectra	Spectra / VGX 900	1 2 3 4 5 6 7 8 9
[18,]	specsxy	SPECS SpecsLab2 xy	xy
[19,]	csv	CSV or TSV	csv tsv tab

**Author(s)**

Sebastian Kreutzer, IRAMAT-CRP2A, Universite Bordeaux Montaigne (France), RLum Team (family support), Marcin Wojdyr (maintainer and author of the library 'xylib'), Peng Zhang (author of the library 'xylib')

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read\_xyData*Import xy-Data for Supported Formats into R*

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## Description

The function provides an access to the underlying xylib to import data for supported file formats into R. Usually just the file path is needed. The function automatically recognises allowed formats. See [rxylib-package](#) for supported formats.

## Usage

```
read_xyData(file, verbose = TRUE)
```

## Arguments

**file** [character](#) (**required**): path and file to be imported. The argument accepts an URL.

**verbose** [logical](#) (*with default*): enables/disables verbose mode

## Value

The functions returns a [list](#) of matrices.

## Function version

0.1.0

## Author(s)

Sebastian Kreutzer, IRAMAT-CRP2A, Universite Bordeaux Montaigne (France)

## Examples

```
## Not run:
##load example dataset
file <- system.file("extdata/ExampleSpectrum.CNF", package = "rxylib")
results <- read_xyData(file)

##plot spectrum
plot(results[[1]],
      type = "l",
      log = "y",
      xlab = "Energy [keV]",
      ylab = "Counts",
      main = "Thorite - 1800 s")

mtext(side = 3, "Canberra Inspector 1000, 3 x 3 NaI probe")

## End(Not run)
```

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