Package 'xlum'

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Type Package

Title Read, Write, and Convert xlum Data

Version 0.1.0.9000-28

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Description Support for the xlum-file format for exchange and long-term preservation of luminescence data.

License GPL-3

Depends R (>= 4.1),
utils

Imports methods,
xml2 (>= 1.3.3)

Suggests spelling (>= 2.2),
testthat (>= 3.1.3)

Encoding UTF-8

Language en-GB

LazyData true

RoxygenNote 7.1.2

Collate 'read_xlum.R'
'utils.R'
'validate_xlum.R'
'write_xlum.R'
'xlum-package.R'

R topics documented:

xlum-package 2
read_xlum 2
validate_xlum 3
write_xlum 4

Index **5**

xlum-package *Read, Write, and Convert xlum Data*

Description

Support for the xlum-file format for exchange and long-term preservation of luminescence data.

Details

Support contact

- https://github.com/R-Lum/xlum/discussions

Bug reporting

- https://github.com/R-Lum/xlum/issues

Project source code repository

- https://github.com/R-Lum/xlum

Package maintainer

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read_xlum *Import xlum files*

Description

Imports xlum files using xml2::read_xml. Comes with a few convenience features, such as the transformation of string lists to numeric vectors where meaningful.

Usage

```
read_xlum(file, verify = TRUE, output = "xlum_list")
```

Arguments

file	character (**required**): path to file
verify	logical (*with default*): enable/disable format validation
output	character (*with default*): output object of the import, supported are "xml_document", "list", "xlum_list" (the default)

Details

Supported output options

`"xlum_list"` (default): imports XML-data and coerces them to list. Numeric values for level `<curve>` are transposed into numeric vectors for better handling

`"list"`: imports XML-data and coerces it to a list, no further treatment of data

`"xml_document"`: unprocessed output from xml2::read_xml

Value

The output depends on the setting selected in `output`. It will be either an xml2::xml_document, list, or a list of class `xlum_list`.

How to cite

Kreutzer, S., 2022. read_xlum(): Import xlum files. In: Kreutzer, S., 2022. xlum: Read, Write, and Convert xlum Data. R package version 0.1.0.9000-28.

Author(s)

Sebastian Kreutzer, Geography & Earth Sciences, Aberystwyth University

Examples

```
file <- system.file("extdata/xlum_example.xlum", package="xlum")
read_xlum(file)
```

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validate_xlum *Validate xlum format against an XSD reference schema*

Description

A a convenience wrapper around xml2::xml_validate against the reference format description shipped with xlum-package

Usage

```
validate_xlum(file)
```

Arguments

`file`	xml2::xml_document	(**required**): object to test

Value

Results of the validation logical with attributes

How to cite

Kreutzer, S., 2022. validate_xlum(): Validate xlum format against an XSD reference schema. In: Kreutzer, S., 2022. xlum: Read, Write, and Convert xlum Data. R package version 0.1.0.9000-28.

Author(s)

Sebastian Kreutzer, Geography & Earth Sciences, Aberystwyth University

Examples

```
file <- system.file("extdata/xlum_prototype.xlum", package = "xlum")
validate_xlum(file)
```

`write_xlum` *Write xlum files*

Description

Create xlum files using xml2::read_xml

Usage

```
write_xlum(x, file, ...)
```

Arguments

`x`	`xlum_list`, list, xml2::xml_document (**required**) : input object
`file`	character (**required**): valid file path and file name with ending `.xlum` (will be add automatically if needed)
`...`	further arguments to be passed to xml2::write_xml

Value

Creates an XML-file with ending `*.xlum`

How to cite

Kreutzer, S., 2022. write_xlum(): Write xlum files. In: Kreutzer, S., 2022. xlum: Read, Write, and Convert xlum Data. R package version 0.1.0.9000-28.

Author(s)

Sebastian Kreutzer, Geography & Earth Sciences, Aberystwyth University

See Also

xml2::write_xml, read_xlum

Examples

```
file <- system.file("extdata/xlum_prototype.xlum", package="xlum")
out_file <- tempfile()

xlum_data <- read_xlum(file)
write_xlum(xlum_data, out_file)
```

Index

∗ **package**
xlum-package, 2

character, *2*, *4*

list, *3*, *4*
logical, *2*, *3*

numeric, *3*

read_xlum, 2, *4*

validate_xlum, 3

write_xlum, 4

xlum *(*xlum-package*)*, 2
xlum-package, 2, *3*
xml2::read_xml, *2–4*
xml2::write_xml, *4*
xml2::xml_document, *3*, *4*
xml2::xml_validate, *3*