Package 'alabaster.bumpy'

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Title Save and Load BumpyMatrices to/from file

Version 1.0.0

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Description Save BumpyMatrix objects into file artifacts, and load them back into memory.
This is a more portable alternative to serialization of such objects into RDS files.
Each artifact is associated with metadata for further interpretation;
downstream applications can enrich this metadata with context-specific properties.

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Depends BumpyMatrix, alabaster.base

Imports methods, Matrix, BiocGenerics, S4Vectors, IRanges

Suggests BiocStyle, rmarkdown, knitr, testthat, jsonlite

VignetteBuilder knitr

RoxygenNote 7.2.3

biocViews DataImport, DataRepresentation

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R topics documented:

loadBumpyDataFrameMatrix

Load a BumpyDataFrameMatrix object

Description

Load a BumpyDataFrameMatrix object based on its metadata.

Usage

```
loadBumpyDataFrameMatrix(assay.info, project)
```

Arguments

assay.info	Named list of metadata for the BumpyDataFrameMatrix, generated by the corresponding stageObject method.
project	Any argument accepted by the acquisition functions, see ?acquireFile. By default, this should be a string containing the path to a staging directory.

Value

A BumpyDataFrameMatrix object.

Author(s)

Aaron Lun

Examples

```
# Mocking up a BumpyMatrix.
library(BumpyMatrix)
library(S4Vectors)
df <- DataFrame(x=runif(100), y=runif(100))
f <- factor(sample(letters[1:20], nrow(df), replace=TRUE), letters[1:20])
out <- S4Vectors::split(df, f)
mat <- BumpyMatrix(out, c(5, 4))

# Staging it:
tmp <- tempfile()
dir.create(tmp)
meta <- stageObject(mat, tmp, "BUMPY")

# Loading it:
loadBumpyDataFrameMatrix(meta, tmp)
```

stageObject,BumpyDataFrameMatrix-method
Stage BumpyDataFrameMatrix objects

Description

Staging method for [BumpyDataFrameMatrix](#) objects. See ?[stageObject](#) for more details.

Usage

```
## S4 method for signature 'BumpyDataFrameMatrix'
stageObject(x, dir, path, child = FALSE)
```

Arguments

x	A BumpyDataFrameMatrix object.
dir	String containing the path to the staging directory.
path	String containing a prefix of the relative path inside dir where x is to be saved. The actual path used to save x may include additional components, see Details.
child	Logical scalar indicating whether x is a child of a larger object.

Value

A named list of metadata, to be used by [.writeMetadata](#).

Author(s)

Aaron Lun

See Also

[useBumpyHDF5](#), to control whether the concatenated data frame is saved as a CSV or HDF5 file.

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useBumpyHDF5   *Save BumpyMatrix data to HDF5*

Description

Use HDF5 for the underlying data frame, i.e., obtained after [unlist](#)ing the [BumpyMatrix](#). This is less intuitive than a CSV but preserves the precision of floating-point numbers.

Usage

```
useBumpyHDF5(use)
```

Arguments

use   Logical scalar indicating whether to save in HDF5.

Value

If use is missing, a logical scalar is returned indicating whether data should be saved in HDF5.

If use is provided, it is used to set the corresponding flag globally. The previous value of the flag is returned invisibly.

Examples

```
useBumpyHDF5()

old <- useBumpyHDF5(FALSE)
useBumpyHDF5()

# Setting it back.
useBumpyHDF5(old)
```

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