

mtimport

mtimport import and block-process Zeiss MultiTime LSM image sets

`IM = mtimport(PARAM1,VAL1,PARAM2,VAL2,...)` imports each LSM image in a given folder and processes them in blocks of a given size, applying a given function to each block. If no function is supplied, the concatenated, raw image data will be returned. The results are then concatenated into the output matrix `IM` according to the MultiTime parameters indicated in the LSM file names (as in a tile scan).

Use optional name-value pairs to specify the following parameters:

'Path'	The folder from which to process all LSM images. If none is specified, the user will be asked to select a folder
'BinSize'	The size, in microns, of the 2D bins. The default is 50 microns. Note that bins are square and rounded to the nearest pixel.
'Ytiles'	The number of MultiTime tiles in the vertical direction. If no value is given, all tiles are concatenated vertically.
'BlockFun'	The function to apply to each block of each image. If no function is supplied, then <code>IM</code> will just be the raw, concatenated image data.

`IM` is a multidimensional array, where the dimensions correspond to:

- 1 - Y, or image vertical
- 2 - X, or image horizontal
- 3 - Z, or image pages
- 4 - Color channel
- 5 - MultiTime repetition
- 6 - MultiTime group
- 7 - MultiTime block

`[IM,PARAMS] = mtimport(...)` also returns the processing parameters into the structure `PARAMS`.

Example

```
[im,params] = mtimport(...
    'Path', 'Example images\', ...
    'Ytiles', 2, ...
    'BlockFun', @(x)mean(x.data(:)) ) ;
imshow( mat2gray( im(:,:,1,1,1,1,1) ) )
```

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See also

[blockproc](#)

Note

* Created and tested in MATLAB 2014b * Uses parallel processing toolbox * Requires the Bio-Formats matlab package

(v. 5.2.1) available from <http://www.openmicroscopy.org/> * Image pages (z steps) and color channels are processed individually (i.e. separately)

Published output in the Help browser

[showdemo mtimport](#)