

```
>> clear all
>> close all
>> SuperResAlign3D('1-Cep164-647_0002_list_auto_cluster',3,20,175,0.41,90,3,90,5,10);
Loading your molecule list ...
```

```
n0 =
```

```
6305
```

```
frame_max =
```

```
29
```

```
Generating image array ...
```

```
Aligning your super-res images ...
```

```
-----iteration 1 -----
```

```
image 1
image 2
image 3
image 4
image 5
image 6
image 7
image 8
image 9
image 10
image 11
image 12
image 13
image 14
image 15
image 16
image 17
image 18
image 19
image 20
image 21
image 22
image 23
image 24
image 25
image 26
image 27
image 28
image 29
```

```
-----iteration 2 -----
```

```
image 1
image 2
image 3
image 4
```

```
image 5
image 6
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image 9
image 10
image 11
image 12
image 13
image 14
image 15
image 16
image 17
image 18
image 19
image 20
image 21
image 22
image 23
image 24
image 25
image 26
image 27
image 28
image 29
-----iteration 3 -----
image 1
image 2
image 3
image 4
image 5
image 6
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image 8
image 9
image 10
image 11
image 12
image 13
image 14
image 15
image 16
image 17
image 18
image 19
image 20
image 21
image 22
image 23
image 24
image 25
```

```
image 26
image 27
image 28
image 29
-----iteration 4 -----
image 1
image 2
image 3
image 4
image 5
image 6
image 7
image 8
image 9
image 10
image 11
image 12
image 13
image 14
image 15
image 16
image 17
image 18
image 19
image 20
image 21
image 22
image 23
image 24
image 25
image 26
image 27
image 28
image 29
-----iteration 5 -----
image 1
image 2
image 3
image 4
image 5
image 6
image 7
image 8
image 9
image 10
image 11
image 12
Warning: Colon operands must be real scalars.
> In NormalizedGaussian at 33
    In rotregistration3D at 29
    In rotregistrationALL3D at 38
```

```
In SuperResAlign3D at 45
Warning: Colon operands must be real scalars.
> In NormalizedGaussian at 33
    In rotregistration3D at 29
    In rotregistrationALL3D at 38
    In SuperResAlign3D at 45
Warning: Colon operands must be real scalars.
> In NormalizedGaussian at 51
    In rotregistration3D at 29
    In rotregistrationALL3D at 38
    In SuperResAlign3D at 45
Warning: Colon operands must be real scalars.
> In NormalizedGaussian at 51
    In rotregistration3D at 29
    In rotregistrationALL3D at 38
    In SuperResAlign3D at 45
Error using .*
Matrix dimensions must agree.

Error in rotregistration3D (line 49)
    CC(m+1-fix(m/2):m+1+fix((m-1)/2),n+1-fix(n/2):n+1+fix((n-1)/2))
    = ...

Error in rotregistrationALL3D (line 38)
    [allim2x,dataf3,alignk] =
    rotregistration3D(ftl,dataf0,angrange,angstep,rotrange,rotstep,imsize,
zoomfactor,
    pixelsize, photonpercount);

Error in SuperResAlign3D (line 45)
    [aligniter,sumimregi,s,allIm,data] =
    rotregistrationALL3D(images0,data0,angrange,angstep,n_iteration,rotrange,rotstep,imsize,
zoomfactor,
    pixelsize, photonpercount);

>> SuperResAlign3D('1-Cep164-647_0002_list_auto_cluster',4,20,175,0.41,90,3,40,4,5);
Loading your molecule list ...

n0 =

    6305

frame_max =

    29

Generating image array ...
Aligning your super-res images ...
-----iteration 1 -----
image 1
```

```
image 2
image 3
image 4
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image 22
image 23
image 24
image 25
image 26
image 27
image 28
image 29
-----iteration 2 -----
image 1
image 2
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image 21
image 22
```

```
image 23
image 24
image 25
image 26
image 27
image 28
image 29
-----iteration 3 -----
image 1
image 2
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image 26
image 27
image 28
image 29
-----iteration 4 -----
image 1
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image 9
image 10
image 11
image 12
image 13
```

```
image 14
image 15
image 16
image 17
image 18
image 19
image 20
image 21
image 22
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image 24
image 25
image 26
image 27
image 28
image 29
-----iteration 5 -----
image 1
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image 3
image 4
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image 6
image 7
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image 10
image 11
image 12
image 13
image 14
image 15
image 16
image 17
image 18
image 19
image 20
image 21
image 22
image 23
image 24
image 25
image 26
image 27
image 28
image 29
Elapsed time is 929.651571 seconds.
>>
```