EBL Patterning

**No. of samples we have decided:**

For Perpendicular anisotropy: 2 (2 nm thickness) and 1 (1 nm thickness) = total 4 samples

For In-plane anisotropy: 2 (2 nm thickness)

Hence total of **6 samples**

In each sample there will be **30** 100um X 100um box.

**Samples specification for perpendicular anisotropy:**

**Thickness: 2 nm**

1. Circular structure of diameter **150 nm**, each of these structures will be separated by **441 nm** (for 0.5KT energy), in a 100umX100um box, there will be 227 X 227 = 51,529 structures
2. Circular structure of diameter **50 nm**, each of these structures will be separated by **102 nm** (for 0.5KT energy), in a 100umX100um box, there will be 980 X 980 = 9,60,400 structures

**Thickness: 1 nm**

1. Circular structure of diameter **150 nm**, each of these structures will be separated by **276 nm** (for 0.5KT energy), in a 100umX100um box, there will be 362 X 362 = 1,30,004 structures
2. Circular structure of diameter **50 nm**, each of these structures will be separated by **64 nm** (for 0.5KT energy), in a 100umX100um box, there will be 1,563 X 1,563 = 24,42,969 structures

**Sample specification for In-plane anisotropy:**

**Thickness: 2 nm**

1. Elliptical cylinder, of **250 x 200 nm dimension**, each of these structures will be separated by **1896 nm** (for 0.5KT energy), in a 100umX100um box, there will be 53 X 53 = 2,809 structures
2. Elliptical cylinder, of **200 x 150 nm dimension**, each of these structures will be separated by **1348 nm** (for 0.5KT energy), in a 100umX100um box, there will be 74 X 74 = 5,476 structures
3. Elliptical cylinder, of **150 x 100 nm dimension**, each of these structures will be separated by **849 nm** (for 0.5KT energy), in a 100umX100um box, there will be 118 X 118 = 13,954 structures
4. Elliptical cylinder, of **110 x 50 nm dimension**, each of these structures will be separated by **435 nm** (for 0.5KT energy), in a 100umX100um box, there will be 230 X 230 = 52,900 structures