

Leia 3D Printing

Timeline

Last Updated 4/28/20



Goal: Join Particles with optical trapping

- Base – Particle is attached to other surface
- Medium Stretch – Particle on particle attachment
- Far Stretch – Shape is created with particles and multiple colors

Milestones

- 1) At home test kit
 - a. Find best arm
 - b. Entire kit is designed and 3d printed
 - c. Create first whole prototype
 - d. Perform manual tests at first
 - i. Observer with camera
 - e. Add automation motors
- 2) Particle on another surface
 - a. Done inside of working home test kit
 - b. Adhesive used to pull particle out of optical trap
 - i. Test different types of adhesive
- 3) Particle adhered to another particle
 - a. May uses adhesion to start
 - b. Need some way to “cure” particles (heat or uv)
 - c. Will want to implement automation
- 4) Create a shape out of multiple particles
 - a. Will need curing
 - b. Automation
 - c. Shape programming
 - d. Larger size than test tubes....

Timeline

May

				1	2	3
4 M1	5	6	7 M2-b	8	9	10
11	12	13	14	15	16	17
18 M2	19	20	21 M3-b	22	23	24
25	26	27	28 M3-c	29	30	31

June

1 M3	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30					

July

		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	30 M4		