	Activity	Year 1	Year 2	Year 3
Experiments (SS)	**Experimental setup**: microfluidics, vesicle formation			
	Osmophoresis measurements: effect of vesicle size, membrane type, solute type, fluid viscosity, etc.			
	Model biological vesicles: synthesis of encapsulated vesicles and osmophoresis characterization			
	Application 1) self-organization: characterization of collective vesicle behavior under local gradient			
	Application 2) drug delivery: model drug delivery experiments in confined pores			
Theoretical modeling (YNY)	**Osmophoresis of a poroelastic drop:** for both non-electrolytic and electrolytic solutes			
	Osmophoresis of a vesicle enclosing a poroelastic fluid: for both non-electrolytic and electrolytic solutes			
	Osmophoresis of a multilamellar vesicle: spherical and nearly spherical vesicles			
	Collective behavior of osmophoretic poroelastic drops: dilute limit			
	Collective behavior: non-dilute limit by coarse-grained direct numerical simulations			