

1129-76-462

**Qi Wang\***, Department of Mathematics, Columbia, SC 29208. *Active Liquid Crystals and their Applications to Cell Motility.*

I will discuss a set of models for active liquid crystals that are derived following the generalized Onsager principle. Their predictions in various confined geometries will be discussed briefly. Then, I will apply these models to study cell motility. A multiphase complex fluid model incorporating the active liquid crystal as one of the active matter layer will be introduced and discussed. Numerical simulations using the model for cell migration on patterned substrates will be presented. (Received March 21, 2017)