Ingo Rehberg

“Bifurcations in complex fluids”

The dynamic behavior of complex fluids in the neighborhood of bifurcation points is considered as particularly interesting, because here small changes of the external field lead to a maximal response. Moreover, the reaction of the fluid if often accompanied by symmetry breaking processes, which can be experimentally detected with great precision. In particular, we will present measurements of the reorientation of liquid crystalline gels under electric fields [1], and of the dynamic response of magnetic fluids to the change of external magnetic fields [2,3].

