



KEMIJSKI INŠTITUT

Vabilo na Forum40 / Invitation to the Forum40

dr. Aleksandar Popadić

D01, Theory Department

Četrtek / Thursday, 28.2.2019 ob / at 12:30

Velika predavalnica Kemijskega inštituta / Great Lecture Hall,
National Institute of Chemistry, Hajdrihova 19, Ljubljana

Splay-density coupling in semiflexible main-chain polymers

Linear polymers (DNA, synthetic polymers like polyethylene, polyvinyls, polyamides, polyesters, polystyrene, polycarbonates etc) are composed of unbranched chains, which in orientationally disordered state resemble a clod of crumpled threads. In 1970s, it was noticed that if the chains of the polymeric liquid have a preferred direction, a macroscopic connection between the spatial variation and density of chains arises. We introduce a related coupling that occurs already in isotropic linear polymers and is thus quite generic. Here, macroscopic orientational order is induced by density/concentration variations, leading to acoustic/osmotic optical birefringence even in an otherwise isotropic static polymer melt/solution.



Vljudno vabljeni / Kindly invited