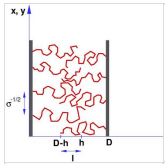

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Polymer-brush-bilayers-equilibrium

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1 Works for me

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SUBMIT TO PLOS ONE

ABSTRACT

By means of statistical mechanics of polymers and density functional theory (DFT), polymer brush bilayers are investigated at thermal equilibrium. Density profiles show how brushes balance compression and interpenetration when they come into contact. Normal pressure indicates that substrates might repel, attract or even do not sense each other (though the brushes interpenetrate) upon varying system parameters. The results, based on that it takes deformations of both brushes into account, suggests that existing theories about polymer brush bilayers (based on blob picture) need highly likely to be reviewed.

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