

Abstract Submitted  
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**Ion condensation near patterned surfaces** YURY VELICHKO,  
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— Using the exactly solvable model we have studied ion condensation near patterned surfaces. Competition between electrostatic energy of interaction with the surface and the energy of ionic crystal of correlated condensed ions result in rich phase behavior. Our results show that the structure of ionic crystal of condensed ions essentially depends on the surface charged density and the size of the pattern. Our results can contribute to understanding of different closed phenomena, like surface pattern recognition, separation and synthesis of molecules near patterned surfaces.

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