ARTICLES DANS DES REVUES AVEC COMITÉ DE LECTURE

2017

Liquid metals: early contributions and some recent developments

Dynamics of field-driven population inversion in a confined colloidal mixture.

Glass transition in hard core fluids and beyond, using an effective static structure in the mode coupling theory

2015

Structure of the glass-forming metallic liquids by ab-initio and classical molecular dynamics, a case study: quenching the Cu60Ti20Zr20 alloy.

Effect of an external field on the structure and the phase transitions of a confined mixture of neutral and dipolar hard spheres
Non-ergodicity transition and multiple glasses in binary mixtures: on the accuracy of the input static structure in the Mode Coupling Theory

C. Brunet, J. G. Malherbe and S. Amokrane, Molec. Phys. 110, 1161 (2012)
Demixing and field-induced population inversion in a mixture of neutral and dipolar-hard spheres confined in a slit pore

Mode-coupling theory for the glass transition: Test of the convolution approximation for short-range interactions


Binary mixture adsorbed in a slit pore: Field-induced population inversion near the bulk instability
Effect of residual interactions in asymmetric colloidal mixtures: theoretical analysis and predictions

Monte Carlo simulation of confined fluids of polarizable particles: an efficient iterative treatment of the local field in slab geometry using Ewald summation

Gelation and phase coexistence in colloidal suspensions with short-range forces: Generic behavior versus specificity

Generalization of Rosenfeld's functional to non-additive hard-spheres: pair structure and test-particle consistency

2009

Controlling the composition of a confined fluid by an electric field

S. Amokrane, A. Ayadim, J.G. Malherbe and C. Regnaut

Equilibrium Route to Colloidal Gelation: Mixtures of Hard-Sphere-Like Colloids

Optimum free energy in the reference functional approach for the integral equations theory

Structure of highly confined fluids: mixture of polar and non polar macroparticles in an external field
2008

Boundary conditions in local electrostatics algorithms

2007

Equilibrium and glassy states of the Asakura-Oosawa and the binary hard sphere mixtures: effective fluid approach

Ornstein-Zernike equations for the pair structure: an efficient method for studying strongly confined colloids

A. Takhtoukh and C. Regnaut, Fluid Phase Equilibria 262, 149 (2007)
Empirical expressions of the pair correlation functions at contact and equation of state of the liquid hard sphere mixtures at large size ratio

Structure of liquid metal alloys: Transferability of local pseudopotentials - A preliminary study

Selective-pivot sampling of radial distribution functions in asymmetric liquid mixtures

2006

Ornstein-Zernike equations for highly asymmetric mixtures: confronting the no-solution challenge

Phase transitions in highly asymmetric binary hard sphere fluids: fluid-fluid binodal from a two component mixture theory.

2005

Potential of mean force in confined colloids: Integral equations with fundamental measure bridge functions

Structure of highly asymmetric hard-sphere mixtures: An efficient closure of the Ornstein-Zernike equations

2004

Fluid-fluid phase transition in hard sphere mixtures from pair distribution functions in the colloidal limit: a critical analysis

Validity of the hard sphere mixture model for sterically stabilized colloids: a critical viewpoint

When mixtures of hard sphere-like colloids do not behave as mixtures of hard spheres

Theory of sterically stabilized colloids: models beyond hard spheres,
2003

Contribution of non hard core triplet correlations to the bridge function of dense fluid

Is the hard sphere mixture a good reference system for sterically stabilized colloids?

On the importance of many-body effects in the effective fluid representation of asymmetric binary mixtures

2002

Validity of the perturbation theory for hard particle systems with very-short-range attraction.

Shape of the liquid-vapor coexistence curve for temperature and density dependent effective interactions.

Attractive forces in sterically stabilized colloidal suspensions: From the effective potential to the phase diagram.

2001

Effective interaction between AOT reverse micelles : a study from the potential of mean force at infinite dilution.

On some empirical expressions of the contact values of the pair distribution functions
and the fluid-fluid phase separation in hard sphere mixtures.

True mixture versus effective one component fluid models of binary hard sphere mixtures: a comparison by simulation.

Asymmetric binary mixtures with attractive forces: towards a quantitative description of the potential of mean force.

2000

Phase diagram of highly asymmetric binary mixtures: A study of the role of attractive forces from the effective one component approach.

Effective interaction between soft core colloidal particles.