第 3 卷 第 1 號

韓國物理學會 會報
Bulletin of the Korean Physical Society

Vol. 3 No. 1 April 1985

第50回 總會프로그램, 論文抄錄集

日 時 : 1985. 4. 27~28
場 所 : 東國大學校

社團法人 韓國物理學會
Korean Physical Society

열동연 1-4. On the Dynamical Perturbation Method: Application to the Electron Liquids. Jongbae Hong(S.N.U.). A new approximation method, which we call "dynamical perturbation method", in the dynamical theory of many-body systems was developed. The method is general, and its convergence is pretty fast. One of applications of the method was accomplished for a system of homogeneous electron liquids. Peak and shoulder phenomena in dynamical structure factor of simple metals can be shown by this method. The dynamical local-field correction G(k,w) obtained by this method was very similar to others.[1] But ours do not have unphysical singularities which were appeared in G(k,w) obtained by ordinary perturbation method.[1]

1. A Holas, P.K. Aravind, & K.S. Singwi, Phys. Rev. B20, 4912(1979); J T. Devreese, F. Brosens, & L.F. Lemmens, Phys. Rev. B21, 1349(1980).

열동연 1-5. Renormalization analysis of m/n-bifurcations in area-preserving maps. KOO-CHUL LEE and KIM, SANG-YOON (S.N.U) and DUK-IN CHOI (KAIST). By an approximate renormalization group method which is essentially Helleman's schme, we obtain the bifurcation rates and the scaling factors for m/n-bifurcations in area-preserving maps. These values for n = 2, 3, 4, 5, 6 with m = 1 agree well with the asymtotically evaluated values following the m/n-bifurcation sequences.

열동연 1-6. Depolarized Light Scattering from Simple Liquid under Shear : Time correlation Functions. 김 상락* , 김 종진(한국과학기술원. 물리학과).

The time correlation functions associated with the depolarized light scattering from simple liquids under shear are studied via nonequilibrium Molecular Dynamics computer simulation and compared with the equilibrium results.[1] It is found that in the high shear rate, the decay to zero of $C_{\chi}(t)$ is much slower in the plane of shear flow field than in the normal planes to that.

1. A.J. Ladd, T. Litovitz and C. Montrose, J. Chem. Phys. 71, 4242(1979)

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열동연 1-7. Monte Carlo Study of Domain Kinetics of Random Ising Model. Jong Hoon Oh and Duk-In Choi (KAIST). Monte Carlo simulations are used to study the domain kinetics of two dimensional Ising model with random exchange constants which have gausian distribution with mean value J and width δJ. The time variation of spherical domain of spin up state immersed in the background of spin down states is observed when this system is quenched to low temperature. Decay times of domains with various sizes are