

Contents

1	Dielectric Relaxation of Water in Complex Systems.....	1
	Yuri Feldman, Alexander A. Puzenko, Paul Ben Ishai, and Evgenya Levy	
2	High-Frequency Dielectric Response of Hydrogen-Bonded Liquids Between 0.2 and 2.5 THz	19
	Yoshiki Yomogida, Takahiro Iwasaki, Miho Matsumoto, Tomobumi Mishina, and Ryusuke Nozaki	
3	Anomalous Diffusion, Cole-Cole Relaxation and the Space in Which They Occur: Puzzles and Problems	37
	Paul Ben Ishai, Shimon Lerner, Alexander A. Puzenko, and Yuri Feldman	
4	Complex Dielectric Permittivity of Metal-Containing Nanocomposites: Non-phenomenological Description.....	49
	Mortko A. Kozhushner and Leonid I. Trakhtenberg	
5	State of Water in Confinement near Hydrophilic Surfaces Below the Freezing Temperature	69
	A. Greenbaum (Gutina), Alexander A. Puzenko, M. Vasilyeva, and Yu. Feldman	
6	Dielectric Properties and Applications of CVD Diamonds in the Millimeter and Terahertz Ranges	79
	B.M. Garin, V.V. Parshin, V.I. Polyakov, A.I. Rukovichnikov, E.A. Serov, O.S. Mocheneva, Ch.Ch. Jia, W.Z. Tang, and F.X. Lu	
7	Nonlinear Susceptibility Experiments in a Supercooled Liquid: Evidence of Growing Spatial Correlations Close to T_g	89
	C. Brun, D. L'Hôte, F. Ladieu, C. Crauste-Thibierge, G. Biroli, J.-P. Bouchaud, and M. Tarzia	

8	On the Calculation of the Dielectric Properties of Liquid Ionic Systems	103
	Marcello Sega, Sofia S. Kantorovich, Axel Arnold, and Christian Holm	
9	Applications and Implications of Fractional Dynamics for Dielectric Relaxation	123
	R. Hilfer	
10	Spectral Definition of the Characteristic Times for Anomalous Diffusion in a Potential	131
	Yuri P. Kalmykov, William T. Coffey, and Serguey V. Titov	
11	High-Frequency Resonance Absorption as Evidence for Oscillation in a Well Before Escape from a Metastable State in the Kramers Energy Controlled Diffusion Model	151
	William T. Coffey, Yuri P. Kalmykov, Serguey V. Titov, and D.S.F. Crothers	
12	Molecular Dynamics of Polymers at Nanometric Length Scales: From Thin Layers to Isolated Coils	163
	F. Kremer, E.U. Mapesa, M. Tress, and M. Reiche	
13	Fractional Klein-Kramers Equations: Subdiffusive and Superdiffusive Cases	179
	Ralf Metzler	
	Index	195

Recent Advances in Broadband Dielectric Spectroscopy

Kalmykov, Y.P. (Ed.)

2013, XI, 196 p. 75 illus., Hardcover

ISBN: 978-94-007-5011-1