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Nota di contenuto	The scaling of relaxation processes – revisited -- Glassy dynamics from mHz to THz -- The dynamic glass transition as reflected in it´s inter-molecular dynamics and intra-molecular mobility -- The scaling of the molecular dynamics of liquid crystals as reveled by dipoles, neutrons and specific heat -- Dipolar correlations across the time-scales: A Molecular Dynamics investigation -- Linear viscoelasticity of nanocomposites: molecular dynamics simulations of polymer mechanics using LAOS and probe rheology techniques -- Dynamic heterogeneity in binary glass formers -- Dynamics of Debye liquids -- Universality of density scaling -- The calorimetric glass transition in a

wide range of frequency and cooling rate -- Neutrons, Dipoles and Glass Forming Dynamics: What can we learn by comparing neutron scattering and dielectric spectroscopy results? -- Dielectric spectroscopy and dynamic light scattering: two perspectives on molecular reorientation.

Sommario/riassunto

The dielectric properties especially of glassy materials are nowadays explored at widely varying temperatures and pressures without any gap in the spectral range from μHz up to the Infrared, thus covering typically 20 decades or more. This extraordinary span enables to trace the scaling and the mutual interactions of relaxation processes in detail, e.g. the dynamic glass transition and secondary relaxations, but as well far infrared vibrations, like the Boson peak. Additionally the evolution of intra-molecular interactions in the course of the dynamic glass transition is also well explored by (Fourier Transform) Infrared Spectroscopy. This volume within 'Advances in Dielectrics' summarizes this knowledge and discusses it with respect to the existing and often competing theoretical concepts.