

## **Inelastic X-ray and neutron scattering from glasses and liquids**

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The complementarity of inelastic X-ray and neutron scattering techniques for the study of disordered matter is emphasized, both for measurements of the Brillouin scattering at small angles and for the study of the boson peak excitations at higher momentum transfer. At small angles, neutrons can supply information for lower energy transfers, which are at present not accessible with x-rays. On the other hand, a high-resolution neutron measurement at low momentum transfer is restricted to the energy region below the Brillouin line. Therefore the full information is only obtainable by a combination of both methods.

At higher momentum transfer, the study of the dynamic structure factor of the boson peak vibrations supplies information on their eigenvector. Again, the two techniques are complementary: in a substance like vitreous silica the neutrons see preferentially the motion of the oxygens, the x-rays the motion of the silicon atoms.