

shielding

In the context of NMR spectroscopy shielding is the effect of the electron shells of the observed and the neighbouring nuclei on the external magnetic field. The external field induces circulations in the electron cloud. The resulting magnetic moment is oriented in the opposite direction to the external field, so that the local field at the central nucleus is weakened, although it may be strengthened at other nuclei (deshielding). The phenomenon is the origin of the structural dependence of the resonance frequencies of the nuclei.

See also *chemical shift*.

1994, 66, 1163