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Low background materials for high pressure cells used in inelastic neutron scattering experiments.

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The signal-to-noise ratio is the ultimate limiting factor for high pressure neutron scattering experiments where sample environment equipment could create significant background signal which in many cases may significantly exceed the signal from the sample itself. This is the particularly serious issue in case of high-pressure sample environment for inelastic neutron scattering. Here we review materials which could be used for development of new generation of high-pressure cells for inelastic and quasi-elastic neutron scattering experiments. This results will allow designing and producing high pressure vessels with parameters desired for particular neutron scattering experiment.

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