The properties of spectroscopies of their counterparts, implemented in a range of fields. Shaped-pulse-driven DNP broadens the scope and enhances the performance of DNP across a wide range of experimental conditions by making feasible NMR experiments previously deemed impossible. While DNP is most well-known as a method to boost NMR signals by orders of magnitude, it can also be implemented for localization of the NMR signal to distinguish surface water molecules from their bulk counterparts, or to selectively detect other surface species. In the second part of my talk I will present how a combination of the Overhauser DNP (ODNP) and Electron Paramagnetic Resonance (EPR) spectroscopies allowed for elucidating the molecular details underpinning the unusual rheological properties of a promising pressure-sensitive underwater adhesive that was designed to mimic natural adaptations found in mussels.