HIGH RESOLUTION SPECTROSCOPY OF NO IN HE-DROPLETS

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We have investigated the coupling of collective excitations in helium droplets to the rotation of light rotors. If we use NO as a molecular dopant it is possible to suppress this coupling effectively thereby obtaing high resolution spectra of NO in helium droplets. We have been able to resolve the Λ- doubling and the hyperfine structure of the Q(0.5) $\Pi_{\frac{1}{2}}$ transition. Whereas the hyperfine structure remains unchanged compared to the gas phase, the Λ doubling is found to be considerably increased.