

## (8) Applications – digression into sensing and imaging: Xe-129 NMR

- **Xe-129**: ,good' nucleus ( $I = 1/2$ ) at reasonable natural abundance (26.4%),  $\gamma$  comparable to C-13 (-7.4 vs.  $6.7 \times 10^7 \text{ T}^{-1}\text{s}^{-1}$ )
- Huge, polarizable electron cloud ( $[\text{Kr}] 4d^{10}5s^25p^6$ ) makes chemical shift sensitive to local environment
- Amenable to hyperpolarization for improved sensitivity (up to 10.000-fold increase)

Pines , *Isr. J. Chem.* **2014**, 54, 104.

