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 Building 99, Seminar Room I (EG)

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**Boosting the difference between left and right:
 Amplified vibrational circular dichroism**

Vibrational circular dichroism (VCD) is one of most powerful structural probes of molecular chirality that distinguishes itself from other methods in that it can be applied in solution (as opposed to crystallography) and does not require chiral additives (necessary, for example, for NMR, a technique that intrinsically is not sensitive to chirality). VCD has however been limited in its wider applicability due to the intrinsic weak signal magnitudes. We have recently shown that this problem can be overcome if there is an electronic manifold with low-lying electronic states that can be coupled to the molecule of interest. Signal enhancements of up to two orders of magnitude are possible using such a strategy. Several experimental approaches will be presented that enhance the weak magnetic dipole transition moments, and thus the VCD intensities. Three examples are highlighted in Fig.1.

