THE MICROWAVE SPECTROSCOPY ROAD TO THE DETECTION OF THE MOLECULE WITH THE SMALLEST DIPOLE MOMENT IN THE UNIVERSE

HARRY KROTO, *Department of Chemistry and Biochemistry, The Florida State University, Tallahassee FL 32306-4390 USA*.

Several disparate research avenues involving spectroscopy and cluster science were being investigated during the late 70's and early 80's when they came together and resulted in the discovery of C_{60} Buckminsterfullerene. Some of the experiments that involved spectroscopy - mainly microwave spectroscopy - in the detection of unstable molecules, which were difficult to detect whether they had large or small dipole moments, can in retrospect be recognised as small steps that led inexorably to the discovery of a molecule which has no dipole moment at all.