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James C. McGroddy Prize Talk: What Was New About C₆₀¹

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C₆₀ was named molecule of the year by Science in 1991, and in this talk I will discuss what I consider to be the most novel features of the molecule. In some ways C₆₀ is truly unique and the discovery of the molecule in 1985 and its subsequent synthesis in 1990 blazed a trail of new chemical and physical properties that is unlikely to be surpassed by any other molecule. I will discuss the electronic structure of C₆₀, its magnetism, and the conductivity and superconductivity shown by the alkali metal-doped phases.

¹Work Performed at AT&T Bell Laboratories.