Structural Studies of Endohedral Fullerenes of the M_2C_{2n} Class

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Endohedral fullerenes with the composition M_2C_{2n} may exist as ordinary di-metal enodhedrals, $M_2@C_{2n}$, or they may incorporate carbon atoms inside and exist as the carbides, $M_2C_2@C_{2n-2}$. This talk will discuss several recent single crystal X-ray diffraction structural studies of endohedral fullerenes of the M_2C_{2n} class. These results will be compared to earlier studies that showed that Gd_2C_{94} was the carbide, $Gd_2C_2@D_3(85)-C_{92}$, while La_2C_{100} was the simple di-metallo endohedral, $La_2@D_5(450)-C_{100}$.