## SOME NEW INSIGHTS INTO THE MECHANISMS OF NANOSTRUCTURE ASSEMBLY

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The mechanisms whereby various types of nanostructures assemble are still very poorly understood. Quite early on in the beginning of the field, open-ended and closed-ended growth mechanisms as possible routes to the formation of carbon nanotubes were proposed. Similarly the mechanism of fullerene formation is also really poorly understood. Over the last decade or so we have examined a very wide range of methods for nanostructure formation and from these studies some interesting new insights have been gained with regard to their formation in the presence and absence of catalysts.