1125-05-1472     **Shoichi Tsuchiya\*** (`wco.liew6.te@gmail.com`), 2-1-1 Higashimita, Tama-ku, Kawasaki-shi, Kanagawa 214-8580, Japan. *On fullerene graphs.*

*Fullerenes* are cubic carbon molecules in which the atoms are arranged on a sphere in pentagons and hexagons. *Fullerene graphs* are 3-connected cubic plane graphs with pentagonal and hexagonal faces. Such graphs are suitable models for fullerenes : carbon atoms are represented by vertices of the graph, whereas the edges represent bonds between adjacent atoms. It is known that fullerene graphs satisfy many properties. For example, every fullerene graph $G$ is 2-extendable, contains at least $2^{\frac{|G|-380}{61}}$ perfect matchings , and so on. On the other hand, there are open problems on fullerene graphs. For example, deciding whether a fullerene graph has Hamilton cycle or not is still open. In this talk, we introduce new results on fullerene graphs. (Received September 17, 2016)