

ABSTRACT OF THE DISCLOSURE

An atomic carbon material and a preparation method thereof having ion adsorption ability superior to fullerenes and nano-tubes are provided. This atomic carbon material is in a state existing as an organic compound and in a state close to an atom with a diameter of 1 nm or less (theoretically about 1.66 angstrom), and is a bulk where they are congregated with each other with an interatomic force or a particle with a particle size of 1 nm or less. This atomic carbon material is manufactured by heating a raw material composed of an organic material which does not include carbon units in an inactive atmosphere at a predetermined temperature while sequentially increasing the temperature and by individually separating expected elements except for carbon in the aforementioned atmosphere and the organic material from being bonded with carbon by thermally decomposing in order from an element having a lower decomposition temperature at a temperature of 450 C or lower.