Nanocomposite material with new functions or properties superior to traditional composite materials opens a door to transform the way that material is currently applied. This study aims to provide 1) a systematic and quantitative method for obtaining global patent overview, 2) a global patent-citation overview on thermal-stable polymer nanocomposite patents retrieved from the United States Patent and Trademark Office (USPTO). The systematic method provided in this paper is integration of basic patent statistics, technology-function classification, standard industrial classification, patent citation and network properties calculation. All of these contribute not only to a systematic approach for obtaining a quantitative overview of large amount of selected patents, but also bridge the gap between patented techniques and business management activities, e.g. R&D resource allocation, performance evaluation, patent map visualization, patent valuation, in business and industry.