**Evolutiion of nanotechnology**

**by**

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Nanotechnology is currently one of the core technology fields that most countries worldwide have been positively devoted to. The development of nanotechnology has been regarded as the fourth industrial revolution. Schummer (2004) delineated that the policies concerning nanotechnology would present exponential growth after 2000. Therefore, clarifying the evolutionary structure of nanotechnology and identifying key technical trends are the main areas of concentration for nations and researchers who hope to seize the opportunities for development. Different from the previous studies, this study utilizes the perspective of social networks to examine the correlation between patented technologies and provide a more visual and understandable angle to observe the main trends of technology evolution. We obtained the details of 518 US patents in total, which were applied in 149 patent classifications and utilizes the analysis of patent networks and analysis of the degree of network concentration to understand the patent application and evolution of nanotechnology. Besides the trends of nanotechnology patent evolution, this study discovered that technical classifications, such as the “chemistry of inorganic compounds” and “semiconductor device manufacturing: process” among the nanotechnology patents, have the potential for growth. Since the 1980s, these classifications began to have a stable number of patents and became the main stream of nanotechnology's patent development. In addition, the present study also discovered that US nanotechnology patents account for a large proportion of applications among the several main technical classifications, playing a leading role in nano research.