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Empirical Study on the Distribution and Growth Trend of Biotechnology Patents in China

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Author(s)

Zhongguo Shi, Jing Li

ABSTRACT

Since 1980s, China has made great performance at economic growth, and greatly improved its innovation level. As one of the most important aspect of emerging technology industry, biotechnology industry has also gotten great development. And, as the most important representation index of innovation activity, number and growth of biotechnology patents are also significant. Using OECD' s standard of biotechnology patents as the method to collect the data of biotechnology patents, this paper got detailed data of biotechnology patents in China, including spatial distribution data across 31 province, autonomous region, municipality directly under the central government, and time series data from 1985 to 2010. And further, this paper constructed quintic overdetermined equation of one variable to simulate the trend of patent number varying with the time from 1985 to 2010, made use of Matlab Software and took the solution of simulation model. After F-test, it is believed that the simulation model is reliable. Based on this model, scientific estimation about the distribution of biotechnology patents in China from 2011 to 2015 is presented.

KEYWORDS

Biotechnology Patent; Biotechnology Industry; Spatial Distribution; Simulation Model; Overdetermined Equation; Matlab

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