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Agent Technology Situational Express Analysis in Assessment of Technological Development Level of the BRICS Countries

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Stages of development and operation of specialized agent system concerning collection and analysis of the BRICS countries' scientific publications are considered in this paper. The data are extracted from more than 60 sources of authoritative publications in fields of Chemistry, Physics, Genetics, Biochemistry, Ecology, Geology etc. Algorithms for data analysis used in the system directed to reveal scientometric indicators and factographic information.

The fact analyzed scientific publications are indexed by a referential database Web of Science indicates credibility level of the material. However, the form of Web of Science providing information imposes its limitations, that can be overcome with the help of specialized agents in the inner loop of the system.

Aggregation of the material is done in a centralized database. However, there is also a mechanism using prepared SQL queries and a separate function for forming tables of the proper format for data output as MS Excel format, that is appropriate for an end user.

The work result let to assess the development level of certain technologies and research in the BRICS countries in a short time. And since the system has a certain degree of autonomy a constant monitoring of scientific and technical activities in the BRICS countries is possible.

It is concluded that the use of agent technologies for collection and processing of materials in this field significantly accelerates the analysis of scientific and technical publications in comparison with manual mode, and also have a high degree concretization of particular indicators for scientific activity in the analyzed field of publication activity.

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