

RESEARCH PROGRESS ON ANAEROBIC DIGESTION OF CELLULOSE WASTE BASED ON BIBLIOMETRIC ANALYSIS

Pan Zhao, Xiaona Wang, Shuang Zhang, Yan Guo and Qunhui Wang

School of Energy and Environmental Engineer, University of Science and Technology Beijing, 30 Xueyuan Road, Haidian District, Beijing 100083, China

MOTIVATION

Lignocellulosic biomass has a significant potential for biomass fuel production.

The crystalline and reticulate structure formed by the lignin, cellulose, and hemicellulose increases the difficulty of anaerobic digestion.



GOAL

To study the progress of the anaerobic digestion of cellulose waste and the future development trend.

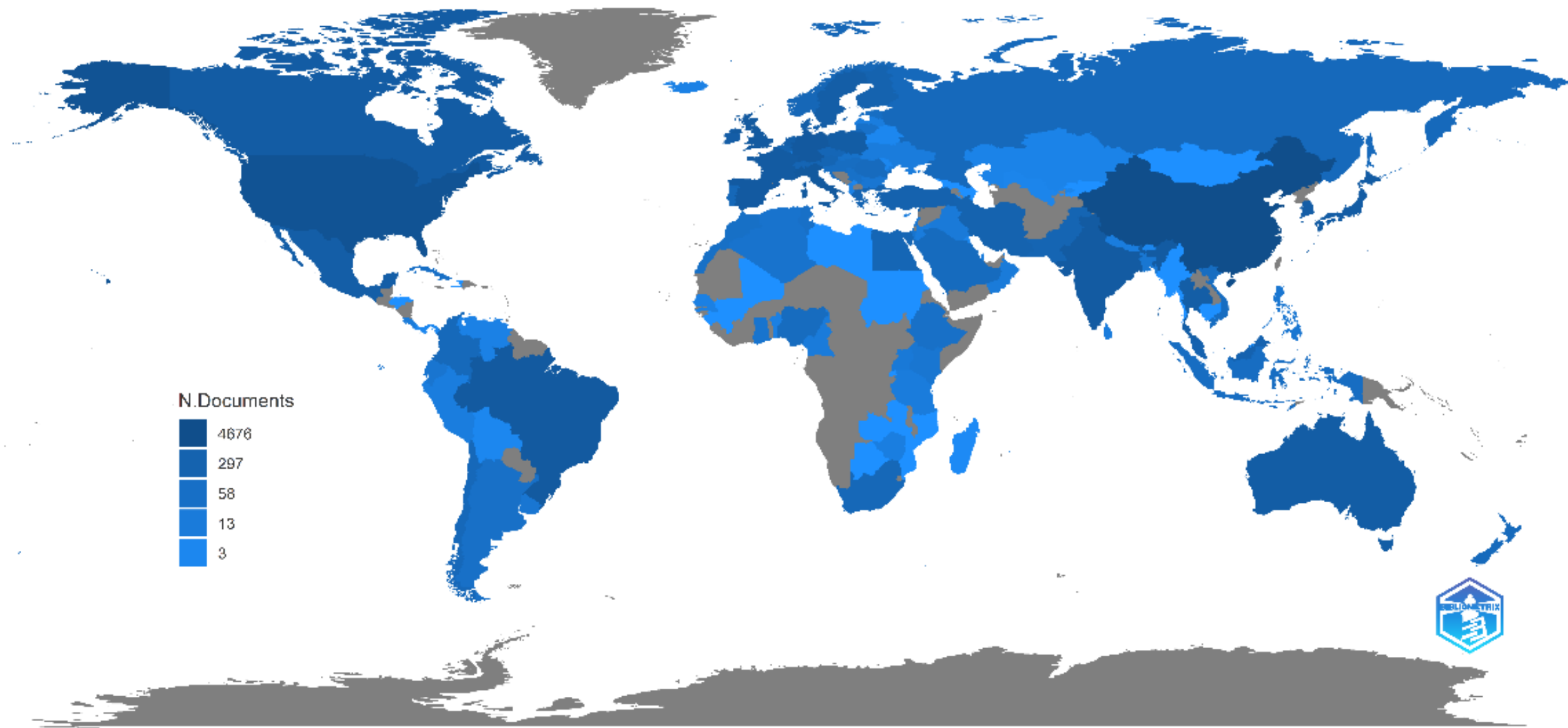
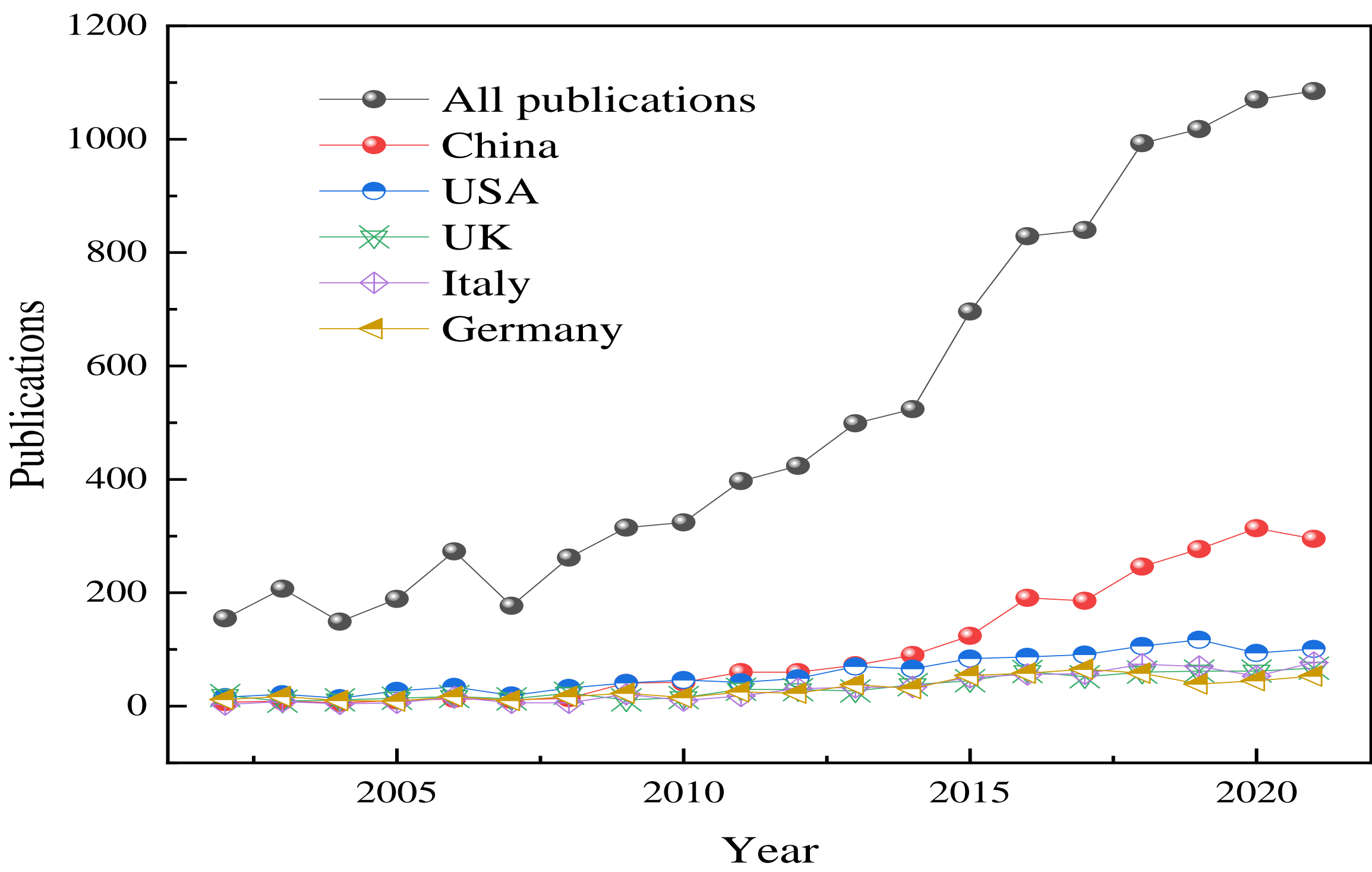
To summarize the current hot areas to improve the anaerobic digestion of cellulose waste.



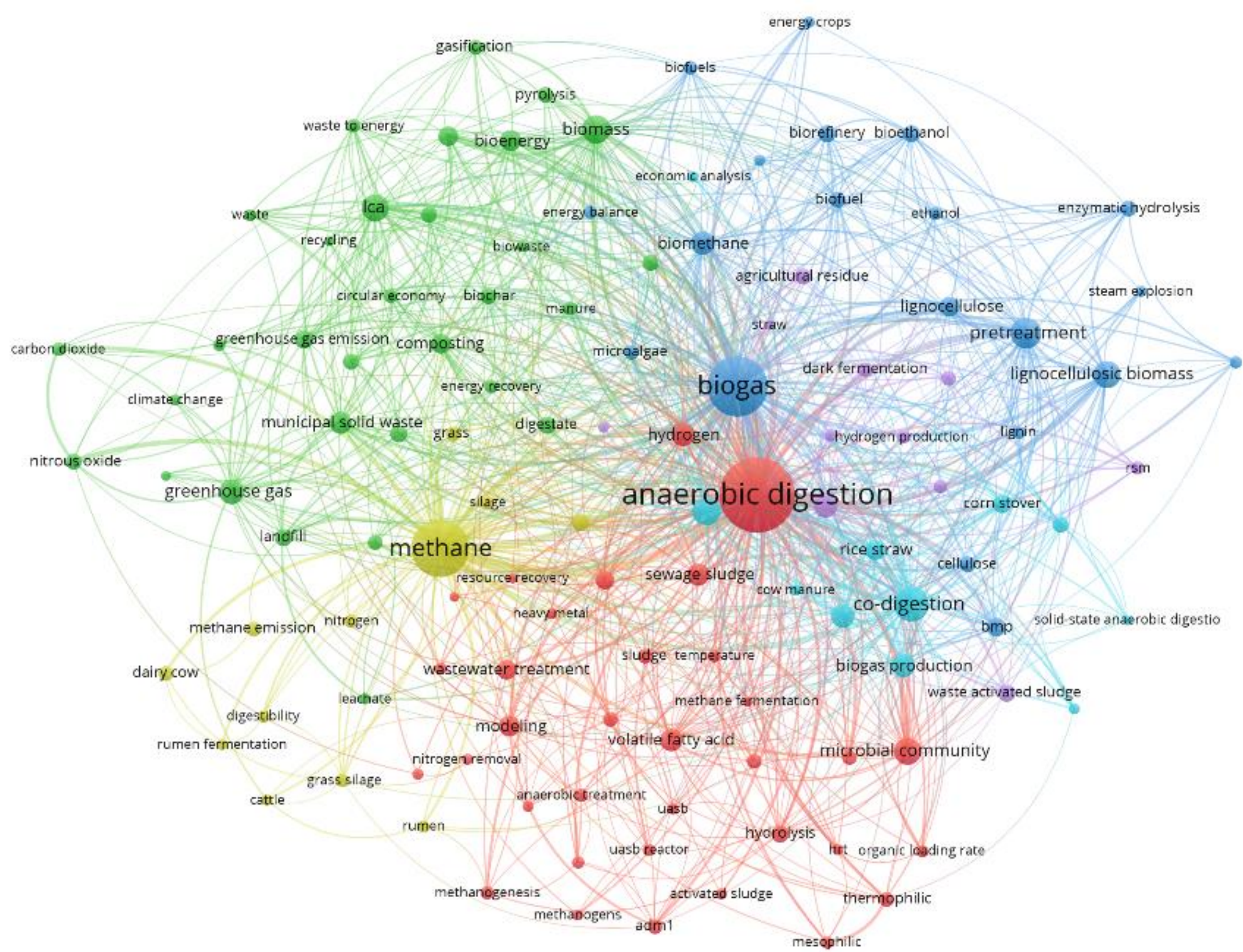
STRATEGY

- ◆ Information summarized from the ISI Web of Science published by Thomson Reuters and Science Citation Index Expanded (SCIE) database were the primary data source
- ◆ cellulose* waste* or fiber* waste* or fibre* waste or garden waste* or paper* waste* or straw* waste* or agricultur* residue* or yard* waste* or lignocellulosic biomass or forests waste or grass) and (anaerob* digest* or biogas or methane) was used as a search phrase
- ◆ All the analysis were all count using Excel 2019, Bibliometrix(in R) and VOSviewer

RESULTS AND DISCUSSIONS



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- ◆ Research on the anaerobic digestion of cellulose waste has developed rapidly in this century.
- ◆ Anaerobic digestion of cellulose waste has been actively explored and studied in many countries around the world.
- ◆ Pretreatment and co-digestion play an important role in improving the efficiency of anaerobic digestion of cellulose waste.

CONCLUSIONS

- ◆ China was the most productive country.
- ◆ the overall research related to the anaerobic digestion of cellulose waste is increasing
- ◆ Pretreatment, co-digestion and microbial communities of cellulose waste are hotspots of research.



OUTLOOK

- ◆ Digest more kinds of cellulose wastes.
- ◆ Explore more effective and safer pretreatment and co digestion methods.
- ◆ Exploring the reasons for the change of anaerobic digestion efficiency from the change of microbial community

*Author to whom correspondence should be addressed, E-mail: 18811707205@163.com