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PRODUCTION OF HEAT EXCHANGERS BY ADDITIVE MANUFACTURING: A BIBLIOMETRIC ANALYSIS

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Summary: This bibliometric research investigates the application of additive manufacturing (AM) for heat exchanger (HX) production, a field of great potential for high-end applications in industries like aerospace or automotive. The work reveals extensive development of research in this field over the last two decades, with an explosive rise in publications and their resulting impact. The study determines major topics of research, such as the application of new materials, design improvement, and creation of new geometries, for example, triply periodic minimal surfaces (TPMS), which are not possible to produce with actual technologies. Further, the research demonstrates large-scale cooperation among researchers, organizations, and nations, indicating the international scope of research in this area. It identifies the United States as the most cited source of articles, followed by China. The results offer revealing data on the current state and future trajectory of research on additively manufactured heat exchangers, indicating potential areas for innovation and collaboration to advance the field.