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## **Glass Foam**

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# Glass Foam

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The manmade climate change is a serious threat to our society. To overcome this, people are seeking different ways to improve energy technologies and thereby to reduce the CO<sub>2</sub> emission. One of the effective ways is to develop energy saving technologies, e.g., to develop high performance insulating materials such as mineral wool for buildings. Currently, inorganic glass foams are becoming one of promising insulator. Inorganic glass foams are lightweight cellular glasses with significantly lower thermal conductivity compared to bulk glasses. In this talk we present the recent advances that our research group have achieved in developing glass foams. We compare inorganic glass foams with other types of foams such as ceramic foams and organic foams and mineral wool regarding chemical, mechanical and thermal stabilities, insulating ability, fire barrier functions, fabrication technology, and raw material sources. We provide new insight into the foaming mechanisms of waste glasses. At the end, we describe perspectives and challenges for future development and applications of inorganic glass foams.