A Vacuum-Bonding Process for Packaging of High Temperature Microreactors

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We are developing a process technology for the packaging of microchemical reactors in a vacuum environment. Such packages are extremely useful in applications where one would like to achieve isolation of heated microstructures to maximize efficiency. We have developed a process based upon low temperature bonding using an inorganic intermediate material. Experiments are on-going to characterize the vacuum sealing level of the bond, as well as to explore the use of getter materials.