Abstracts

Theoretical and Experimental Investigations of Resonance Frequencies in a Microwave Heated Fluidized Bed Reactor

A. Baysar, J.L. Kuester and S. El-Ghazaly. "Theoretical and Experimental Investigations of Resonance Frequencies in a Microwave Heated Fluidized Bed Reactor." 1992 MTT-S International Microwave Symposium Digest 92.3 (1992 Vol. III [MWSYM]): 1573-1576.

Fluidized bed reactors have large potential for use in high purity silicon chemical vapor deposition with microwaves as the energy source. Lowest resonance frequency modes of a cylindrical fluidized bed reactor (cavity) are theoretically and experimentally investigated. The behavior of resonant frequencies is examined with respect to varying dielectric properties. Experimental results are found to be in close agreement with theoretical predictions. The knowledge of resonant frequency behavior will help in designing and operating fluidized bed reactors efficiently.

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