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**Dena Feldman.** *Electromagnetic-Thermal Model of Microwave Processing.* Preliminary report.

Recently there has been interest in minimizing the time required for efficient microwave heating in industrial applications by regulating power supplied to the system. We model this situation in one, two, and three dimensions, solving analytically and numerically the two-way coupled system of differential equations governing electromagnetic power and heat diffusion. (Received September 26, 2006)