

講演会のご案内

グローバルCOEプログラム
「構造・機能先進材料デザイン教育研究拠点」

日時： 平成23年5月31日（火曜日） 15:30-16:30
場所： 材料開発・物性記念館 2F 研究室
講師： Teiichi Ando, Professor (Northeastern University)
題目： Mono-Size Alloy Droplets - Production,
Characterization and Application

Mono-Size Alloy Droplets - Production, Characterization and Application

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Mono-size alloy droplets are produced by controlled capillary jet breakup, a droplet generating process also used in ink-jet printing technology. With regulated Rayleigh instability, controlled through the decoupled process parameters of jet diameter, mass flow rate, and perturbation frequency, mono-size droplets of desired diameter can be generated at high rates with virtually full yield. The uniform size of droplets assures nearly identical solidification paths for all the droplets generated under the same condition. This permits precise prediction of the motion and the thermal and solidification behaviors of the droplets through rigorous process and metallurgical modeling, which is also applicable to industrial thermal spray processes. The mono-size droplets can be in-flight solidified or deposited on a substrate to produce various forms of materials with novel rapid solidification microstructures. Areas of industrial applications are discussed.

コンタクト：安田秀幸（知能・機能創成工学専攻） 内線：7475,