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## Plasma engineering for nano materials

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Plasma process has been extensively and commercially used for top-down nano fabrication especially in semi-conductor area. High temperature arc plasma has been developed for bottom-up nano materials synthesis, however, low production efficiency is the biggest barrier for a wide commercial implementation of the thermal plasma process. In this presentation, a current technical and commercial issues of the thermal plasma process for nano materials synthesis and spheroidization will be reviewed. Also, a synthesis of novel nano hybrid materials by the thermal plasma and its commercial application will be introduced.

Figure 1. CPRI developed RF thermal arc plasma system for nano hybridization process (RF plasma power of 200 KW and nano hybrid materials production rate of 5 kg/hour)

