

IoB 時代を迎え変わる半導体産業

Changes in Semiconductor Industry Encountering IoB Era

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半導体は成長を続け、バイオの世界では巨大市場が期待される。センサー、半導体、MEMSが人体に埋込まれるため、製造技術は特別な技術的障壁をクリアする必要がある。ラピダスは2nm世代以降のファウンドリとして日本で設立された。ラピダスの最先端デバイスとバイオデバイスの組み合わせは巨大市場の需要を満たすために不可欠である。今まさに装置・材料メーカー、プロセスが協力して革新的な製造技術を生み出す時である。

Semiconductor business is growing continuously thanks to its amazing manufacturing technology. Now, the biological market is ready for explosion. Innovation of manufacturing technology for the biological devices is needed realizing high productivity. In coming IoB era, sensors, semiconductor devices and MEMS are implanted into human bodies. For this purpose, manufacturing technology should clear the special technical barriers, including flexibility, disposable, wettability, toxicity free, rejection free from the body, free from hacking, and others. These requirements are not yet much attention in standard semiconductor manufacturing. On the other hand, Rapidus is established as pure semiconductor chip foundry in Japan, focusing on 2nm generation and beyond. The combination of cutting-edge devices, Rapidus is focusing on, and biological devices is essential to meet huge bio-medical market demand. In this paper, manufacturing technology for biological devices is discussed. It is time to collaborate tool makers, material suppliers and process integrators to create innovative manufacturing technology.