

応用セラミックス研究所 288回 講演会

QualComm は、通信用機器の CPU など設計するマイクロソフトを凌ぐ米国の大手企業です。同社は、MEMS 方式の新しいディスプレイを昨年発売し、これと IGZO-TFT を組み合わせて “Mirasole” という次世代ディスプレイを開発中です。その上市は 2017 年と聞いています。講演者はそのディスプレイの開発リーダーを務め、昨年から Qualcomm MESS Technologies 社の CTO です。

日時： 5 月 29 日（金） 17:00 – 18:30

場所： 元素戦略センター（S8） 1F ホール

Display Technologies in Mobile Applications

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Abstract

There are two unique display requirements that stem from mobility: ideally, the display should be 1) *always on* and 2) *always viewable*. The always-on feature of a display is difficult to implement since phones are powered by batteries which have limited capacity that is not expected to improve significantly over time. In addition, mobile applications, as a rule, involve uncontrolled viewing conditions, the most difficult of which is viewing in direct sunlight, making the second mandate also difficult to satisfy.

In this presentation, we introduce next generation Qualcomm® Mirasol™ display technology that integrates an optical MEMS structure with an IGZO TFT backplane to implement a reflective color display system that supports great image quality in virtually all viewing conditions and a power efficiency advantage that can be an order of magnitude better than competing technologies. We review the concepts of interferometric absorption that gives rise to high gamut, reflective color performance, describe the system technologies that have enabled our developments, and present compelling demonstrations of our progress. By enabling always-on and always-visible applications, low power Mirasol displays significantly enhance the mobile user experience.

