

III-V Highlights

Here are a few Highlights concerning emerging uses of III-V semiconductors

- Northrop Grumman Corp. (Redondo Beach, Calif.) is claiming a new world record for transistor speed with an *indium phosphide*-based high-electron-mobility transistor (**InP HEMT**). The device has a maximum frequency of operation of **>1 THz (1000 GHz)**. Researchers at Northrop Grumman's Space Technology sector, led by Richard Lai, detailed how they developed the terahertz-speed transistor in a technical paper delivered at the 2007 International Electron Devices Meeting (IEDM), held recently in Washington, D.C

Semiconductor International, 12/21/2007

- Fujitsu announced a **GaN** based **HF** power chip (around **100 GHz, 1.3 W**) in **2010**; here is a [link to the article](#).
Semiconductor International, Oct./Nov. 2010

- In "Solid State Technology", Jan. 2012, some interesting information concerning LED production is given. Highlights are:

- Yield for **1 mm² (GaN based)** devices is around **25 %**.
- Largest cost factor is the package and the Gold!
- Average size moved from about **0.5 mm²** to **1 mm²** because more than doubling of light output for same packaging costs. However, yield problem..
- Fab cost around 100 Mil. Euro; half of that for **MOCVD**.