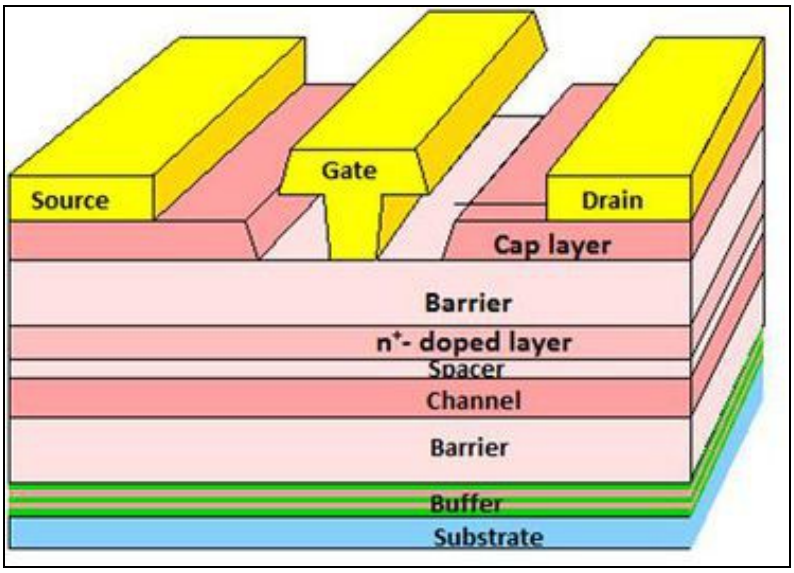
Landscape report for HEMT

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Basic Device structure of HEMT

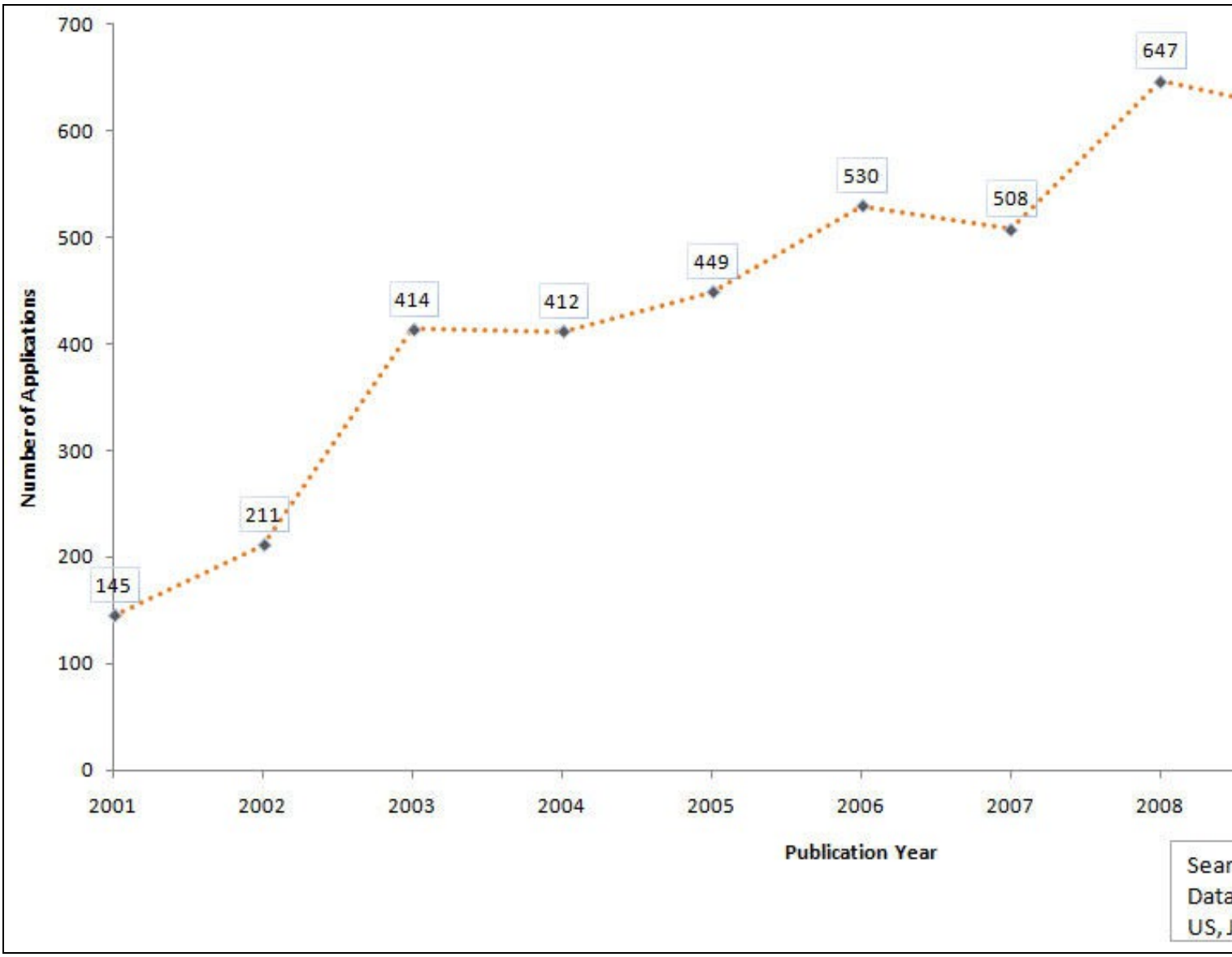
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Abstract

HEMT (High Electron Mobility Transistor) is a field effect device with hetero interface acting as a channel. The name High electron mobility has come from its high electron mobility nature which is a result of potential well near the hetero interface. HEMTs mainly use III-V compound semiconductors as channel material. The main intention behind HEMT is to make use of the high mobility in logical applications instead of silicon. But later it was found that HEMT has very less noise figures which attracted communication sector and since it?s been used widely in the high frequency applications (radar, lte, satellites.Etc).

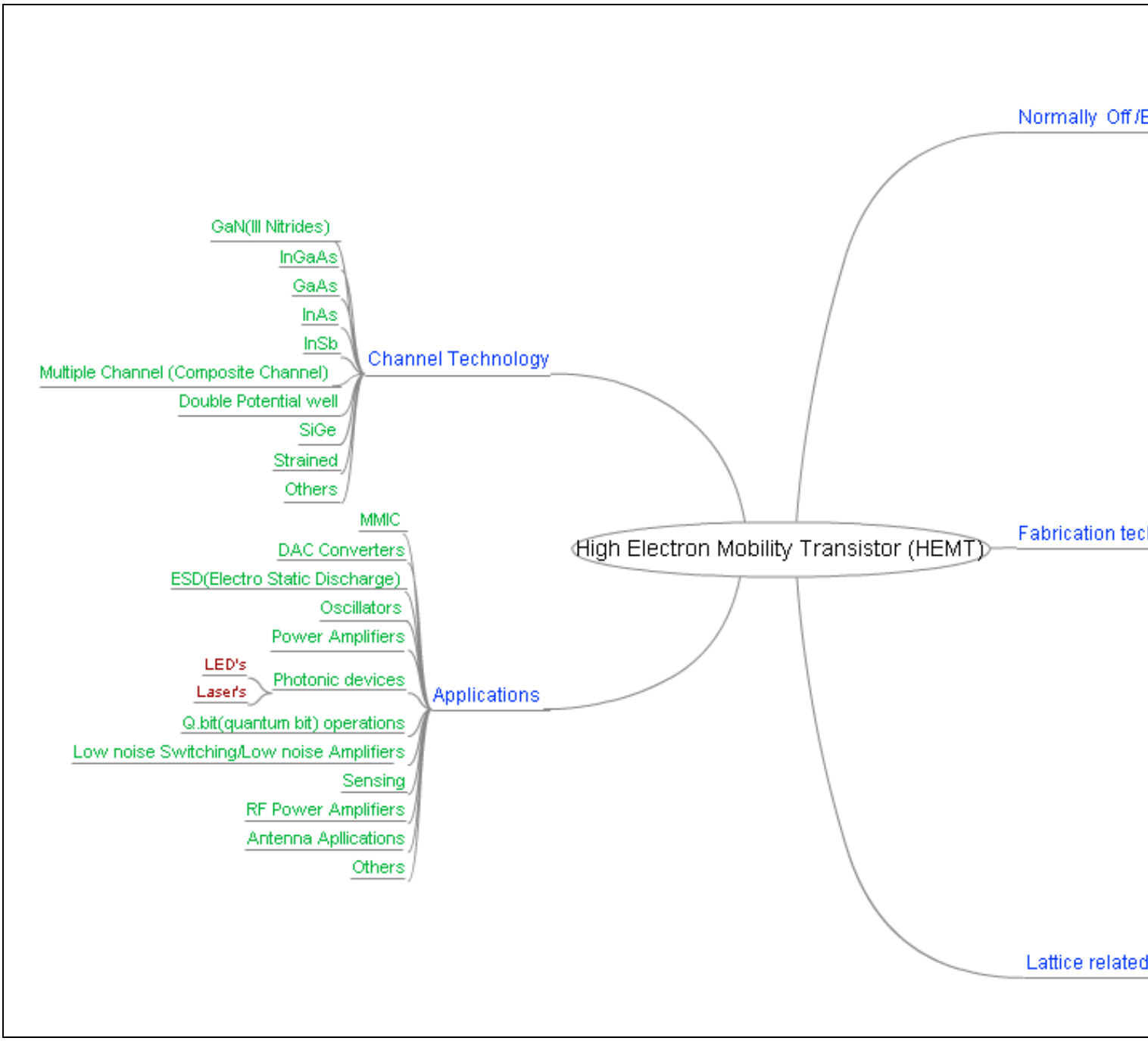
The scaling of silicon is coming to its scaling limitations, researchers again looking back at HEMT as a possible replacement for silicon. The fabrication methods of HEMT?s have also been simplified since its invention. Now the industry predictions state that HEMT will take over convention silicon transistors by 2015. With the potential well as a channel HEMT could achieve frequencies above 1THZ at low power.

Dolcera research focuses on finding the Relevant HEMT patents. The research also focuses on analyzing year wise patent activity, leading industry players and country wise patent activity. The research resulted in 6527 patents that are related to HEMT. The scope of our research covers more than 90 countries. The work also includes categorizing the obtained patents based on the relevant technology.



HEMT has got quite a lot of interest in the recent years which replicates in the year wise chart of patent publications

Taxonomy for HEMT technology



An interactive taxonomy gives you the complete picture of HEMT technology at one glance

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