



Nanobottles

Technology through patent glass

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Why use patents as technology indicator?

- Patents provide clear idea of number of players in market for a particular technology and key interest areas of all players.
- Patent data provides an accurate understanding of problems a particular invention is aiming to resolve.
- Patent data helps to understand how technology has changed over the years. For example, patent data can provide evidence of what technical domains were being researched into a decade ago as compared to technical domains being researched today.
- Such a comparison helps in mapping out progress of a technology, knowledge externalities and cross industry innovation prospects
- All the above mentioned points barely scratch the surface of ocean that is patent data analysis
- In this report we aim to present few exemplary conclusions that we could draw from a detailed analysis of nanobottle technology.

What are Nanobottles?

- Nanobottles are hollow bottle-shaped particles with the maximal dimension smaller or comparable with 1 micrometer.
- Carbon nanotubes capped at one end may be regarded as nanobottles.
- Nanobottles can be filled with various chemical compounds, which can be used for transporting those compounds in the human body.
- They can be moved around by magnetic field, after adding a magnetic compound into the bottle content.

LANDSCAPE OF NANOBOTTLE TECHNOLOGY

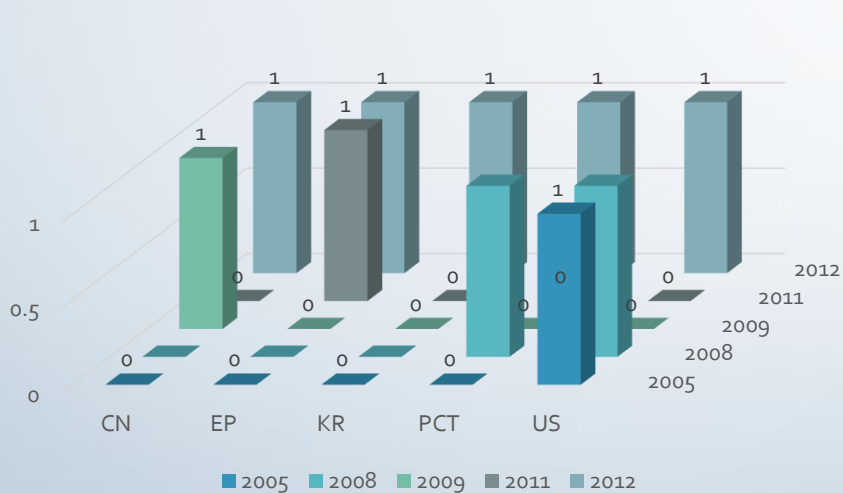
- We have analysed patents related to nanobottle technology from year 2006 to 2016.
- This analysis has been undertaken for fulfilling following objectives:
 - To understand evolution of nanobottle technology, and to map out its progress in terms of key players, geographical distribution.
 - To identify new research areas and new licensing opportunities in field of nanobottle technology
 - To map out applications of nanobottle technology, in order to understand new investment or commercialization opportunities
 - To study Technology competitiveness amongst various key players and various jurisdictions in order to determine technology influence and market power of various key players jurisdictions.

Aims of this presentation

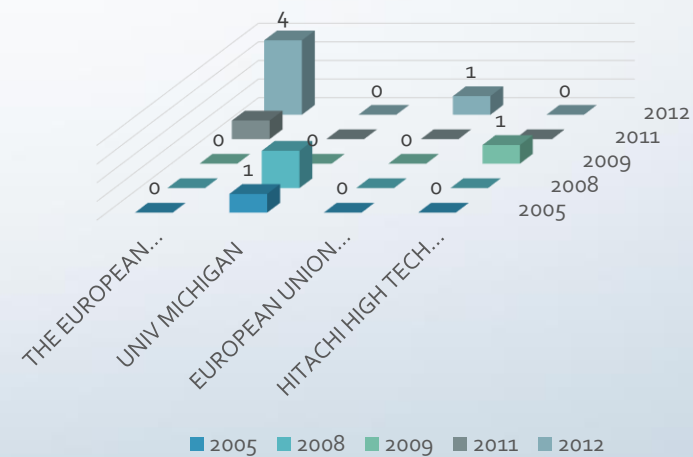
- This presentations aims to present an overview of this study related to nanobottle technology.
- The presentation would include few charts from the original study and basic explanation of each chart.
- Detailed explanation, inferences, conclusions and majority of analysis charts have not been included in this presentation for purpose of retaining simplicity in the presentation.
- Interested candidates may contact the author for complete analysis and report.

Evolution of nanobottle technology from 2006-2016

Evolution of nanobottle technology with respect to application year and Country of Application

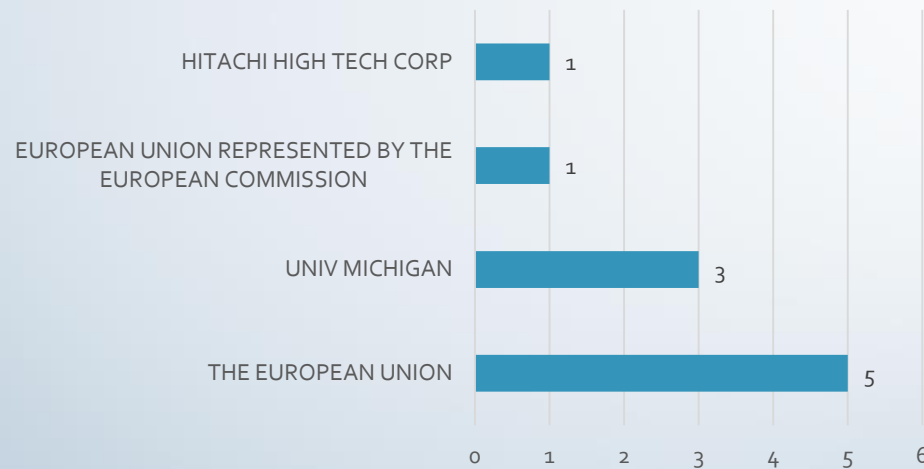


Evolution of nanobottle technology with respect to application year and Applicant

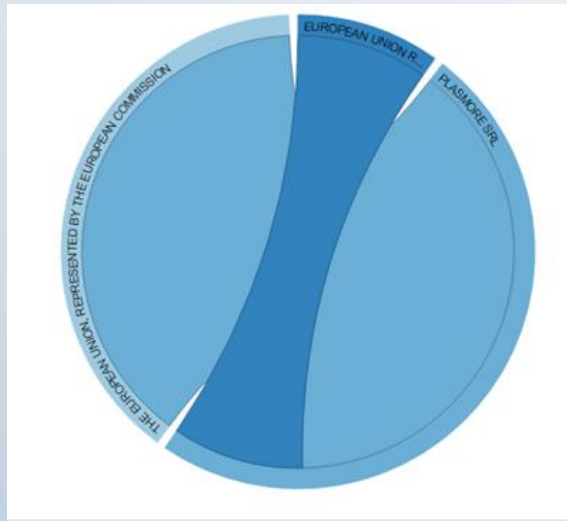


Key Players – Nanobottle Technology

Key Players in Nanobottle technology

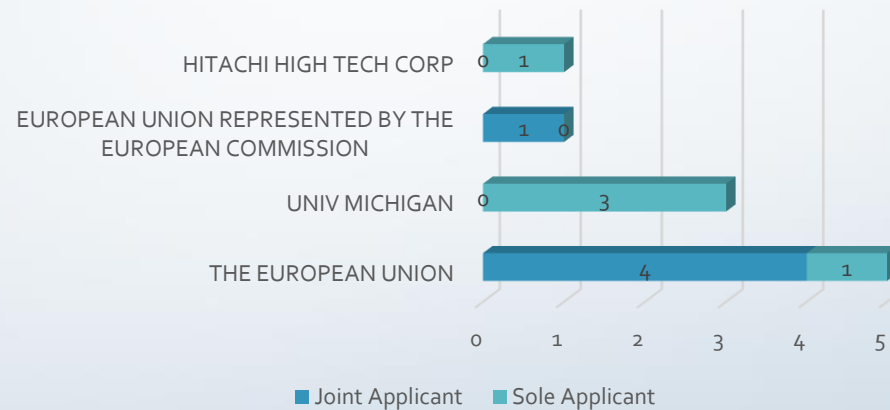


Co-Assignment – Joint Ventures



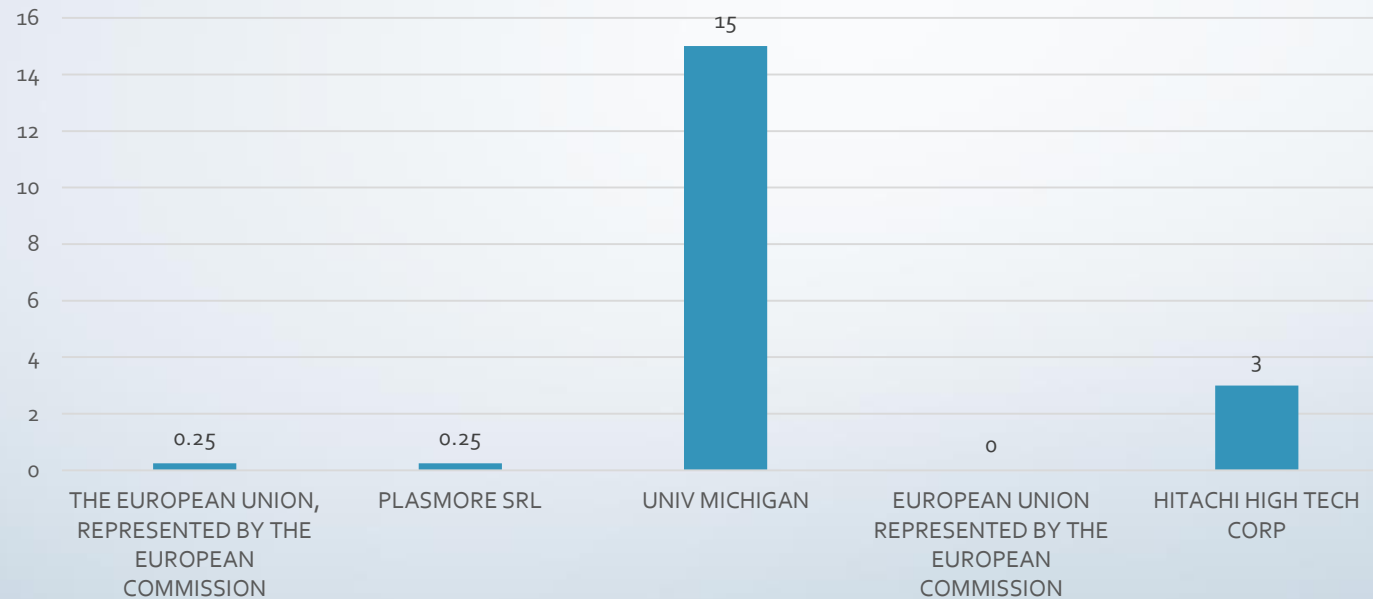
Details available in full report

Applicant Comparison Based on Formation of Joint Venture



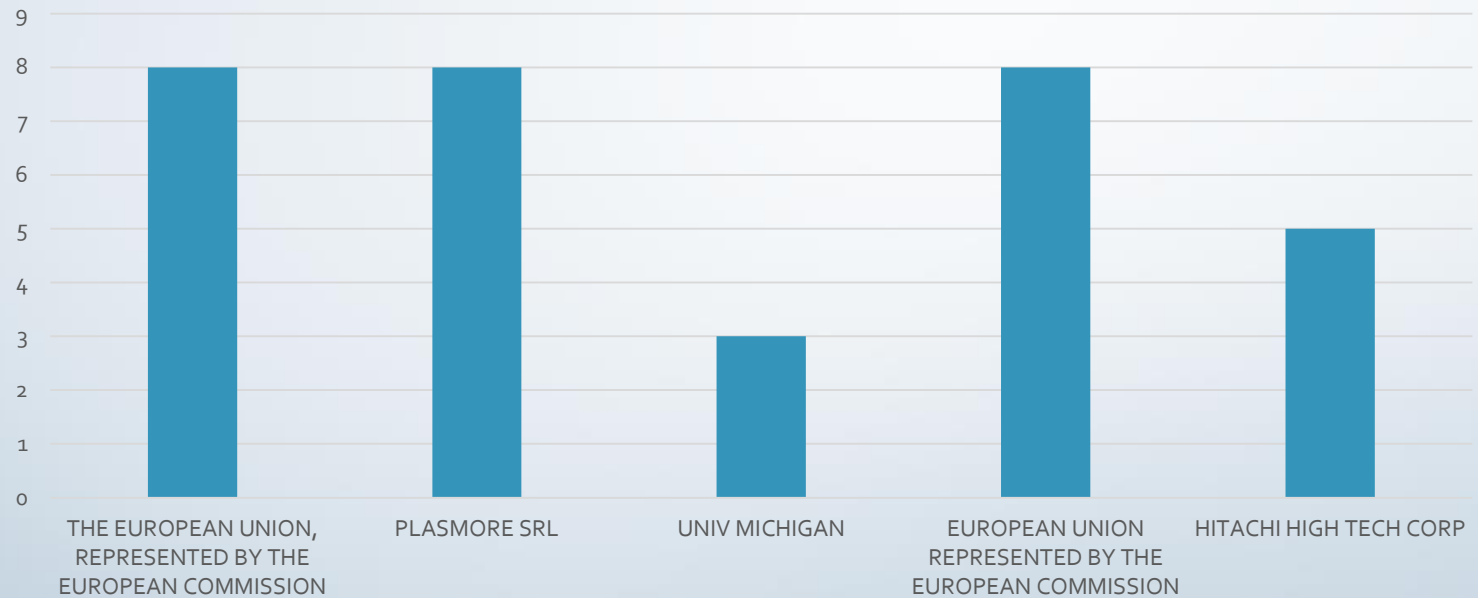
Technology influence of key players

Technology Influence of key Players - Nanobottle Technology



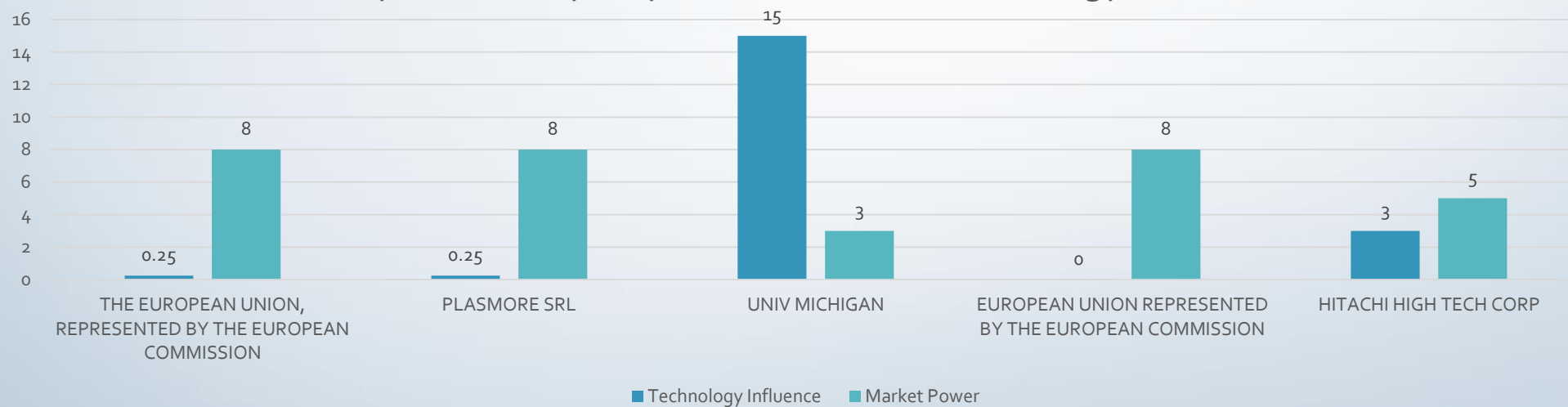
Market Power of Key players

Market Power of Key Players - Nanobottle Technology



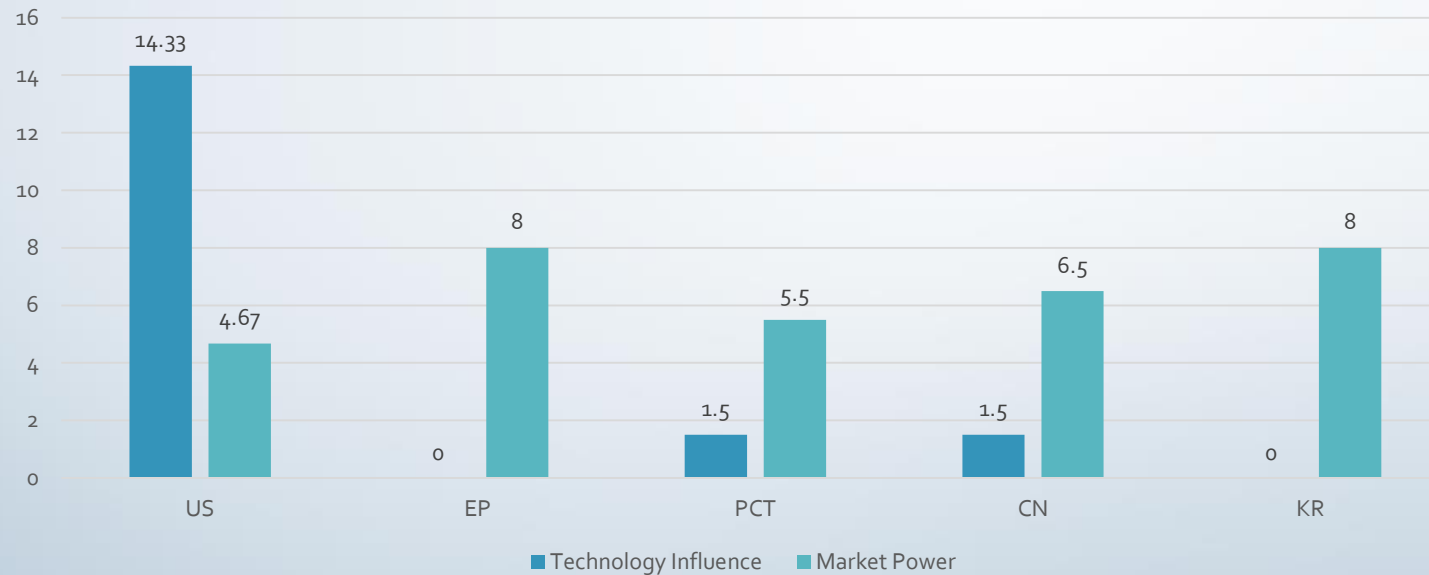
Comparison of technology influence and market power of key players

Comparison - Key Players - NanoBottle Technology



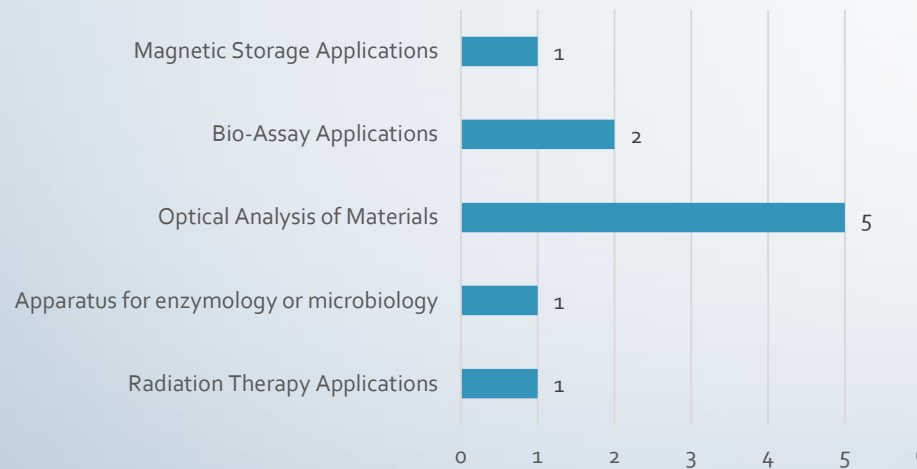
Comparison of technology influence and market power of Key Jurisdictions

Comparison - Key Jurisdictions - Nanobottle Technology

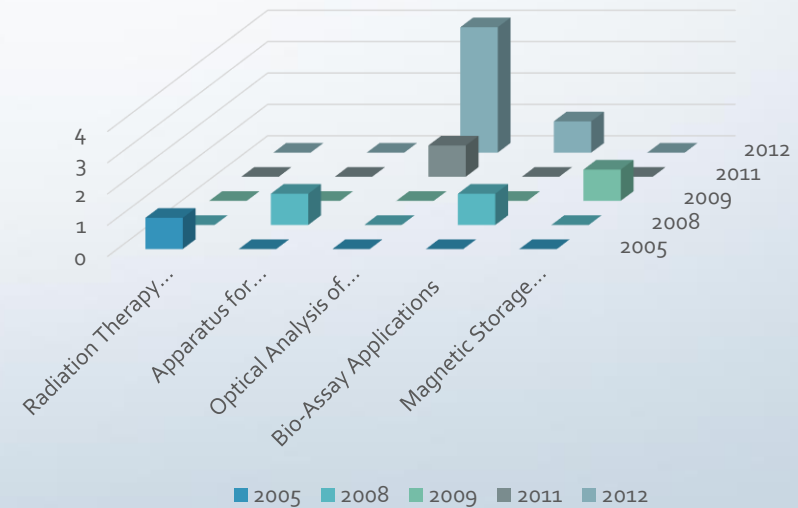


Applications of Nanobottle Technology

Major Application Areas



Applications of Nanobottles through the years - 2006-2016



Summary

- The presentation gives us an overview of Nanobottle technology along with its key players, and major applications.
- We find upon detailed analysis of Citations, family size, applications of technology, problems solved by technology that nanobottle technology has lot more potential that what is being tapped currently.
- There is lot of scope of developing nanobottle technology in fields of Medicine, Microscopy, Radiation Therapy, Bio-Analytical Assays , Screening of Drug Candidates, Chemical Assays and purification of materials amongst others. Details are discussed in complete report available with the author.

About the Author

- **Mrs. Ruchica Kumar** - Ruchica Kumar has Management Diploma in Intellectual Property and Technology from Indian Council of Agricultural Research, India. She is an engineer in Biotechnology specializing in nanotechnology with experience of over 9 years. A registered patent agent working in areas of technical and strategic facets of patent analytics, acquisition and management. She has worked on market assessments of 150 types of nanoparticles. Each assessment resulted in unearthing new application areas and cross-technology sectors for licensing or development of technology portfolios. Her technical skill set amalgamated with a strong patent knowledge base provides her good understanding of dynamics of cross industry innovation.
- Her competencies include:
 - Innovation Forecasting – Analyzing knowledge spill-overs and externalities for forecasting new innovation areas for an organization using patents as indicators
 - Patent Drafting in fields of Medical surgical devices and implants, cardiac rhythm management devices, urology, gynecology.
 - Patent Invalidation and Patentability assessment
 - Technology infusion and diffusion studies using patents as indicators
 - Licensing and Technology Transfer in fields of general engineering
 - Indian Patent filing and prosecution
 - Technology Mapping
 - Pre-litigation due diligence

Contact Us

- We welcome any queries regarding any of the topics you found interesting. We would be happy to provide more details on any of the topics you desire. Also, any queries regarding any issues related to intellectual property are most welcome.
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