Search ?

Academic View — Business View

liquid crystal(2041)
fuel cell(6356)
high concentration(1962)
general formula(1823)
control systems(1664)
control method(1618)
carbon dioxide(1911)
solar cell(3412)
co2(2296)
high temperature(1611)
hydrogen atom(2563)
heavy metal(1556)
fuel cell systems(2390)
heat exchanger(1487)
thin film(1484)

InSciTe

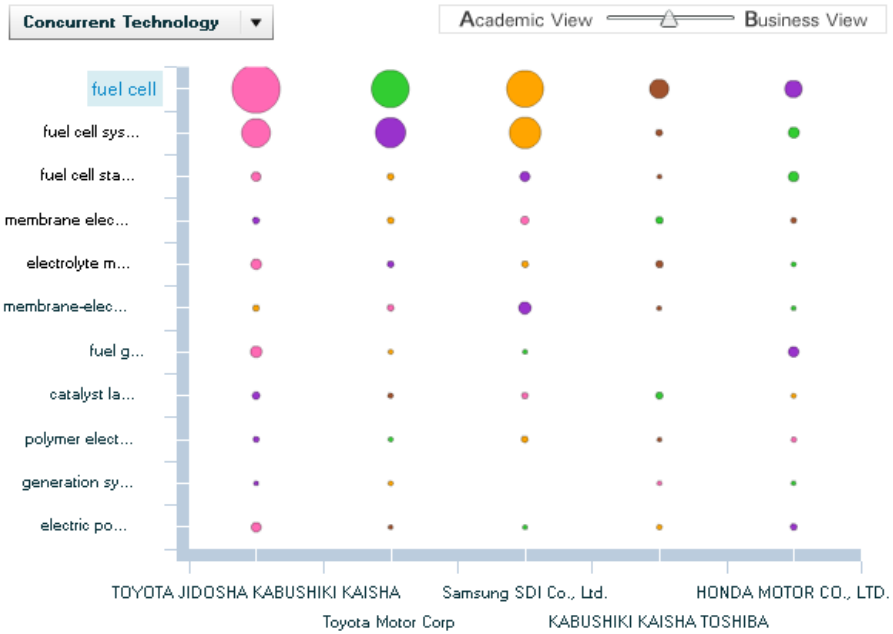
fuel cell Search ?

KOREAN | ENGLISH

All Period 2001 - 2010 Search

Agent-Technology Map

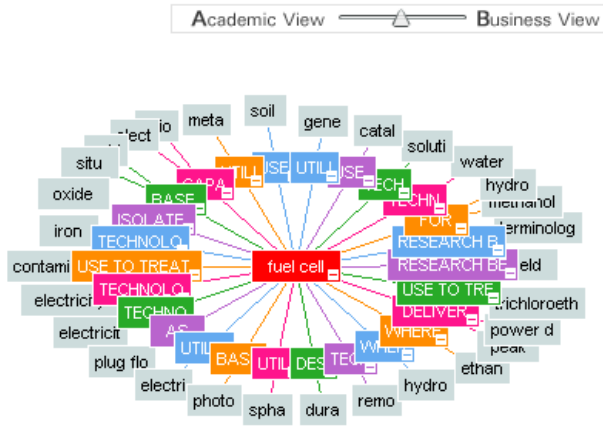
Cooperation/Competition | Paper/Patent



fuel cell

Technology Network

Radar View | Tree View



Map | Trends | Agent | Report

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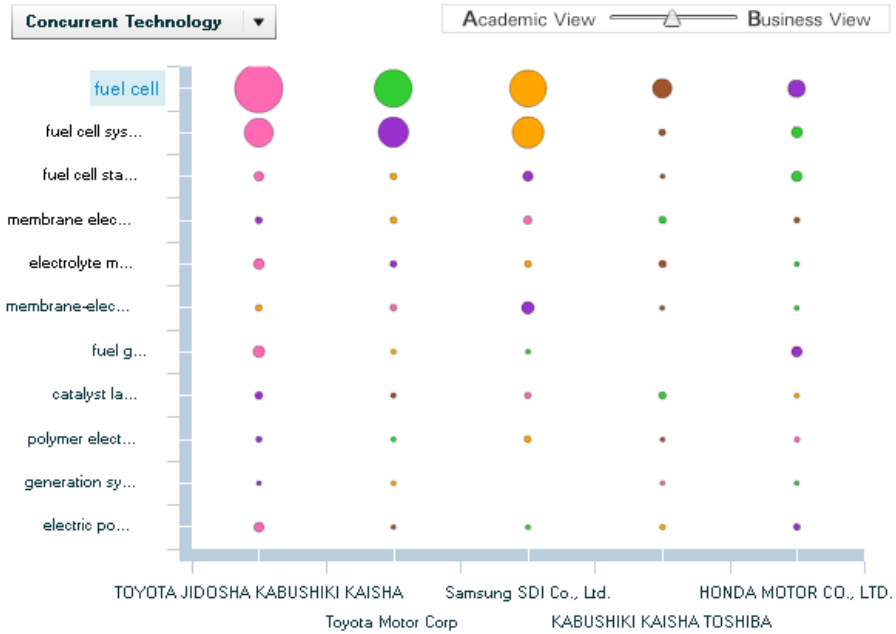
fuel cell Search ?

KOREAN | ENGLISH

All Period 2001 - 2010 Search

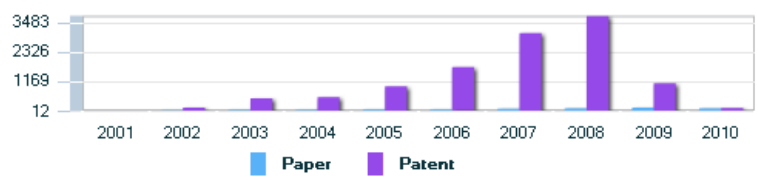
Agent-Technology Map

Cooperation/Competition | Paper/Patent

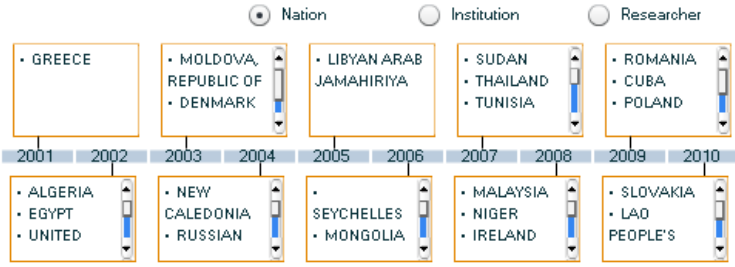


fuel cell

R&D Result Trends



New Entries



Map | Trends | Agent | Report

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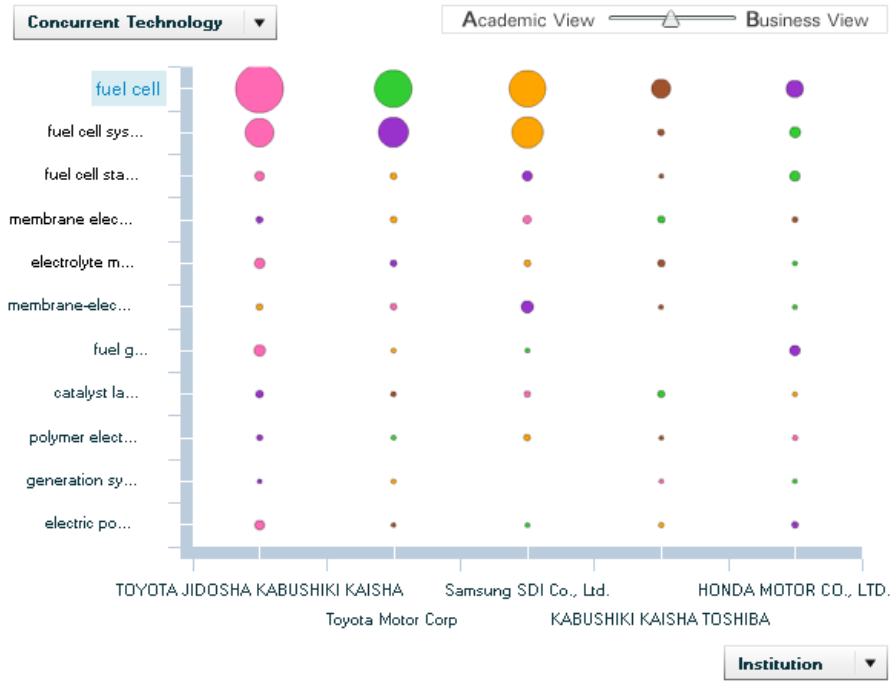

fuel cell

Search Results

Papers(644) | Patents(11911)

Search results 644 with year information

1 An innovative biomass gasification process and its coupling with microturbine and fuel cell systems + ABSTRACT

Kakaras, E(NTUA) | Karellas, S(Natl Tech Univ Athens) | Karl, J(Graz Univ Technol)

TOPIC sofc systems, chp systems, fuel cell, integrated systems, gasification technologies

2 Greenhouse effect reduction and energy recovery from waste landfill + ABSTRACT

Corti, A | CARNEVALE, E | Lombardi, L

TOPIC co2 capture, hydrogen-rich gas, fuel cell, reciprocating engine, conventional treatment

3 Integrated evaluation of distributed triple-generation systems using improved grey incidence approach + ABSTRACT

Shi, GH(N China Elect Power Univ) | Zhang, XT(Kanagawa Acad Sci & Technol) | Zhang, CF(N China Elect Power Univ) | Wang, JJ(Univ Adelaide) |

1 2 3 4 5 6 7 8 9 10

Map | Trends | Agent | Report

InSciTe

fuel cell Search ?

KOREAN | ENGLISH

All Period 2001 - 2010 Search

Agent-Technology Map

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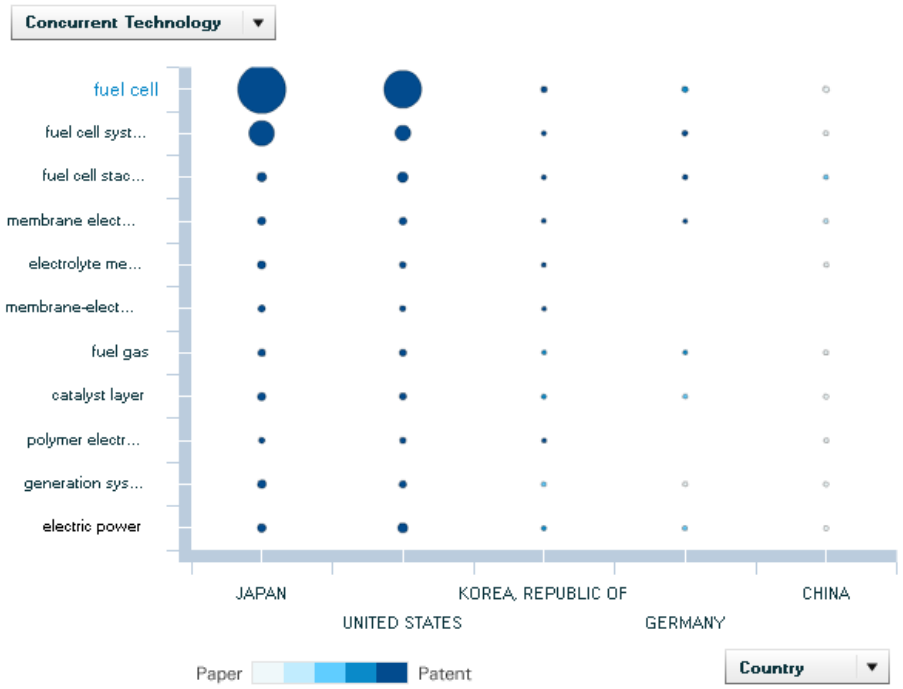


fuel cell

· Left Graph represents **Degree of R&D results & Cooperation/Competition,**
· displays **R&D results of Element Tech. & Concurrent Tech.**
· helps us recognize status of each technology and makes a estimate of its future development possibility.

· X-axis allows to limit the type of agent to "country, Institution, and Researcher".
· Y-axis allows to select Element Tech. & Concurrent Tech. Each circle is proportional to the degree of R&D results.
· Each circle is proportional to the degree of R&D results.
· When two or more agents are engaged in joint research, the circles are represented in the same color.
· The component ratio of paper and patent is represented by chroma.

Top 5 Countries	JAPAN; UNITED STATES; KOREA, REPUBLIC OF; GERMANY; CHINA
Joint research	-
Paper / Patent	644 / 11911
#Agent	6503

Map | Trends | Agent | Report

InSciTe

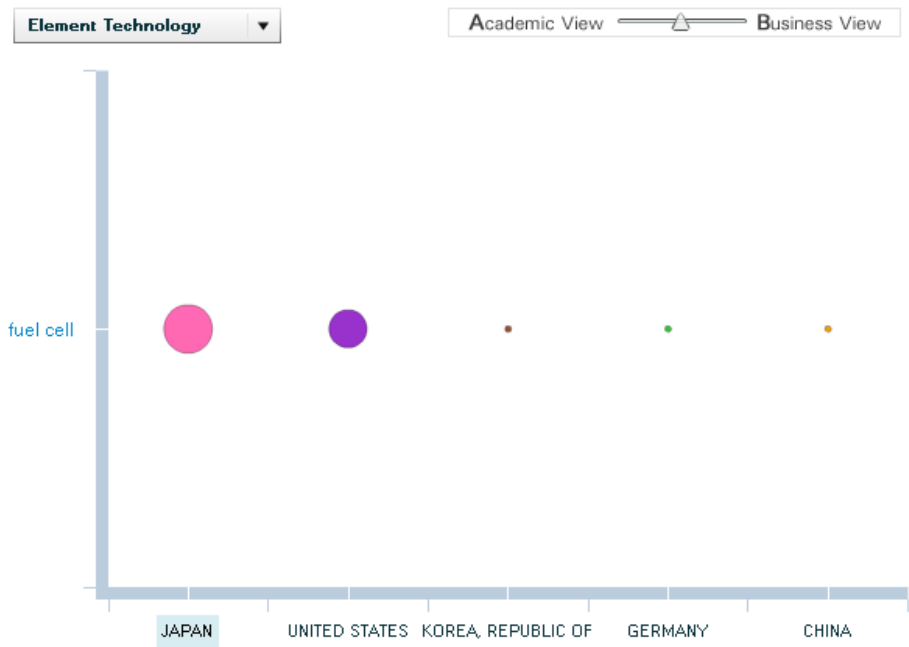
fuel cell Search ?

KOREAN | ENGLISH

All Period 2001 - 2010 Search

Agent-Technology Map

Cooperation/Competition | Paper/Patent



JAPAN

Paper(1%) Patent(99%)

Major Technologies

Paper		Patent
48	fuel cell	3453
6	hydrogen atom	1800
180	solar cell	1465
5	fuel cell systems	1654
1	liquid crystal	1375
14	control method	1325
2	general formula	1269
0	hybrid vehicle	1158
74	thin film	513
9	air conditioner	554

Map | Trends | Agent | Report

Verifying that 'JAPAN' is a major country researching 'fuel cell'

1	Paper/patent on 'fuel cell'					
	FUEL CELL ELECTROCATALYST INK, ELECTROCATALYST LAYER, MEMBRANE-ELECTRODE ASSEMBLY, AND POLYMER ELECTROLYTE FUEL CELL					
	Author	HABA YASUHIRO	Institution	Toppan Printing Co Ltd	Country	JAPAN
2	Paper/patent on 'fuel cell'					
	FUEL CELL					
	Author	SHIBATA KAZUNORI	Institution	Toyota Motor Corp	Country	JAPAN
3	Paper/patent on 'fuel cell'					
	FUEL CELL SYSTEM AND CONTROL METHOD OF FUEL CELL					
	Author	SHIRAKAWA TSUTOMU	Institution	Toyota Motor Corp	Country	JAPAN
4	Paper/patent on 'fuel cell'					
	GAS DIFFUSION LAYER, MEMBRANE ELECTRODE ASSEMBLY, SOLID POLYMER FUEL CELL, AND MANUFACTURING METHOD OF THESE					
	Author	KOUCHI SHINNOSUKE	Institution	Canon Inc	Country	JAPAN
5	Paper/patent on 'fuel cell'					
	FUEL CELL					
	Author	SUZUKI MASANORI	Institution	Toyota Motor Corp	Country	JAPAN
6	Paper/patent on 'fuel cell'					
	MANUFACTURING METHOD OF FUEL CELL					
	Author	IZAWA YASUHIRO	Institution	Toyota Motor Corp	Country	JAPAN
7	Paper/patent on 'fuel cell'					
	ELECTRODE CATALYST FOR FUEL CELL					
	Author	HIMENO TOMOKATSU	Institution	NISSAN MOTOR CO LTD	Country	JAPAN

Countries » Japan

Japan

country name :	Japan [other languages]
iso code :	JP, 392 and JPN
fips code :	JA
capital :	Tokyo
area :	377,835.0 km²
population :	127,288,000
currency :	Yen (JPY)
languages :	Japanese (ja)
neighbours :	
postal code format :	###-#### [postal codes]
national flag :	

Countries » Japan » Administrative Division
Feature Statistic
Largest Cities
Highest Mountains
Other Country Names
Postal codes

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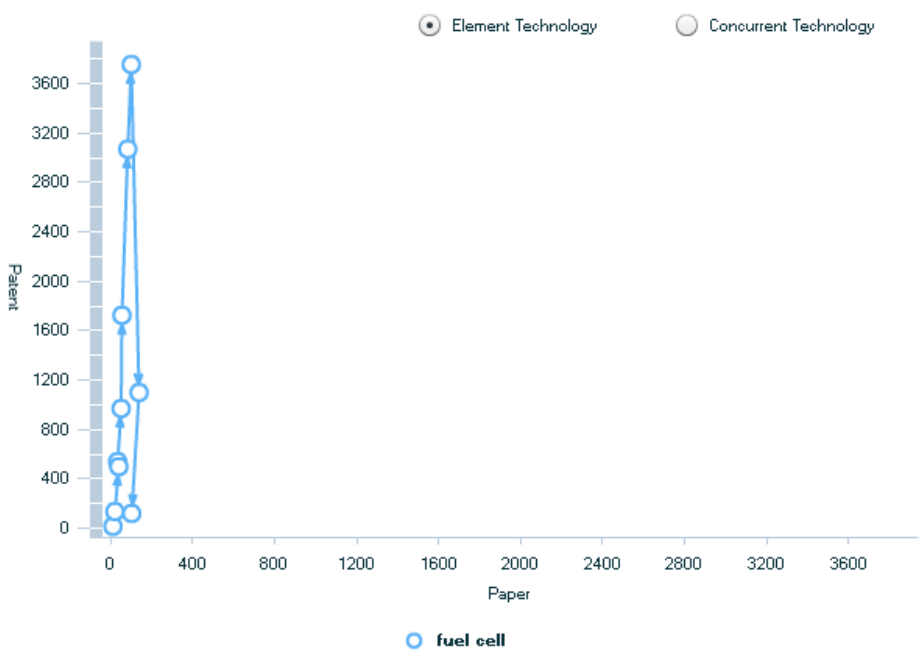
fuel cell Search ?

KOREAN | ENGLISH

All Period 2001 - 2010 Search

Technology Trends

Technology Agent



fuel cell

· **Reverse time series graph depicting both paper and patent results**
· This enables a quick, visual understanding of the changing trends in chronological form.
· This will help us to plan and infer the overall R&D strategies by recognizing the research trends of each agents.

· The horizontal axis displays research agent and relevant paper results, and vertical axis shows research agent and relevant patent result.
· Hovering the cursor over a specific point on the graph displays results for the corresponding year.
· For better legibility, Clicking on the name of a technology or agent.

Map Trends Agent Report

InSciTe

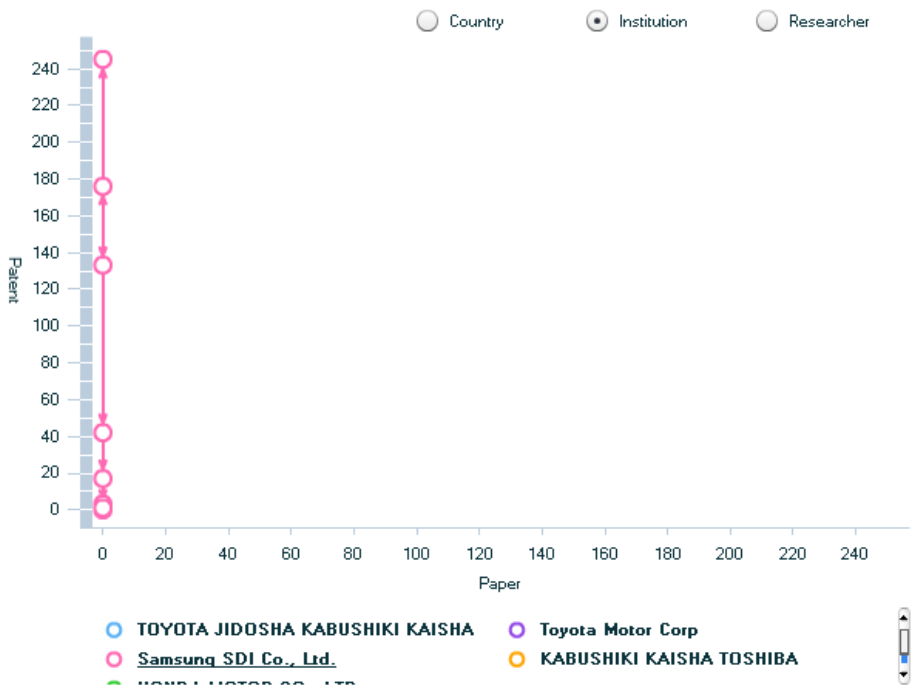
fuel cell Search ?

KOREAN | ENGLISH

All Period 2001 - 2010 Search

Technology Trends

Technology | Agent



fuel cell

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· For better legibility, Clicking on the name of a technology or agent.

Top 5 Institutions are TOYOTA JIDOSHA KABUSHIKI KAISHA, Toyota Motor Corp, Samsung SDI Co., Ltd., KABUSHIKI KAISHA TOSHIBA, HONDA MOTOR CO., LTD. in this field.

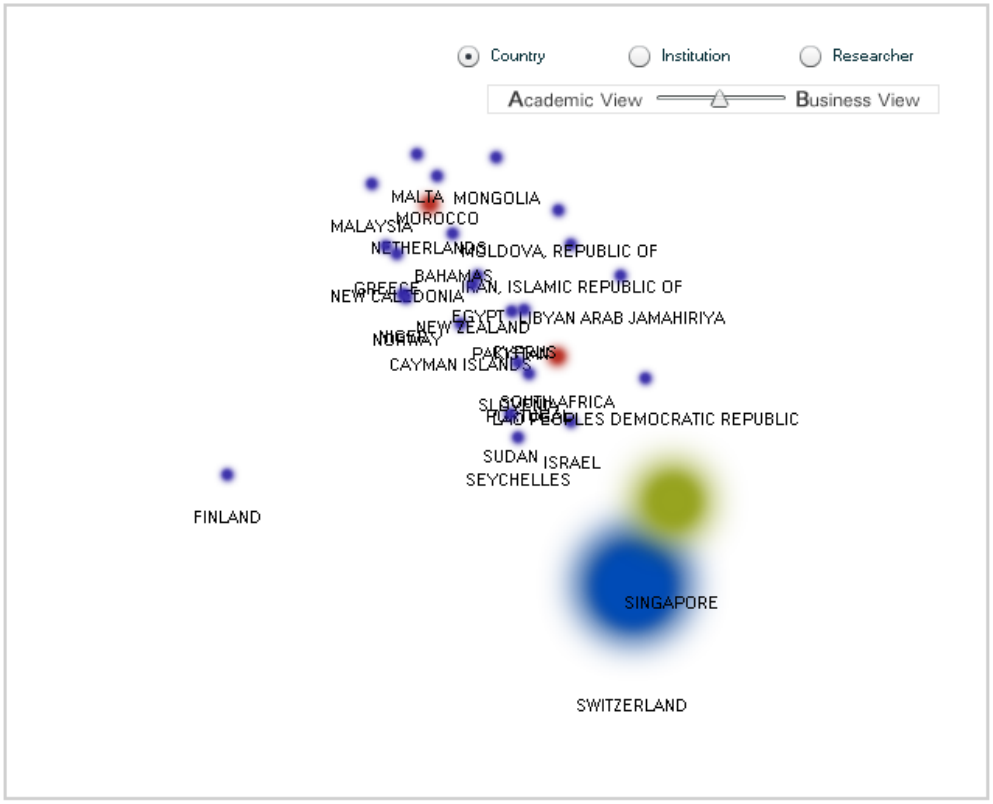
InSciTe

fuel cell Search ?

KOREAN | ENGLISH

All Period 2001 - 2010 Search

Agent Network



fuel cell

· Network of relationships among the various groups of research agents

· By representing each research group in abstract form, the network map provides a convenient view of the cohesiveness of the overall network.

· This provides an understanding of what types of research is being undertaken by which agents, as well as of

· how each agent should be approached in order to obtain knowledge related to specific fields,

· thus helps users to achieve more strategic R&D planning.

· The size of circle corresponds to the extent of R&D results produced, and agent displayed in the same color denotes a group engaged in collaborative research.

· By double-clicking on a particular research group, you can pull up a new agent network that includes the chosen agent.

Agent consists of 148 agents and 28 networks in 'fuel cell' field.

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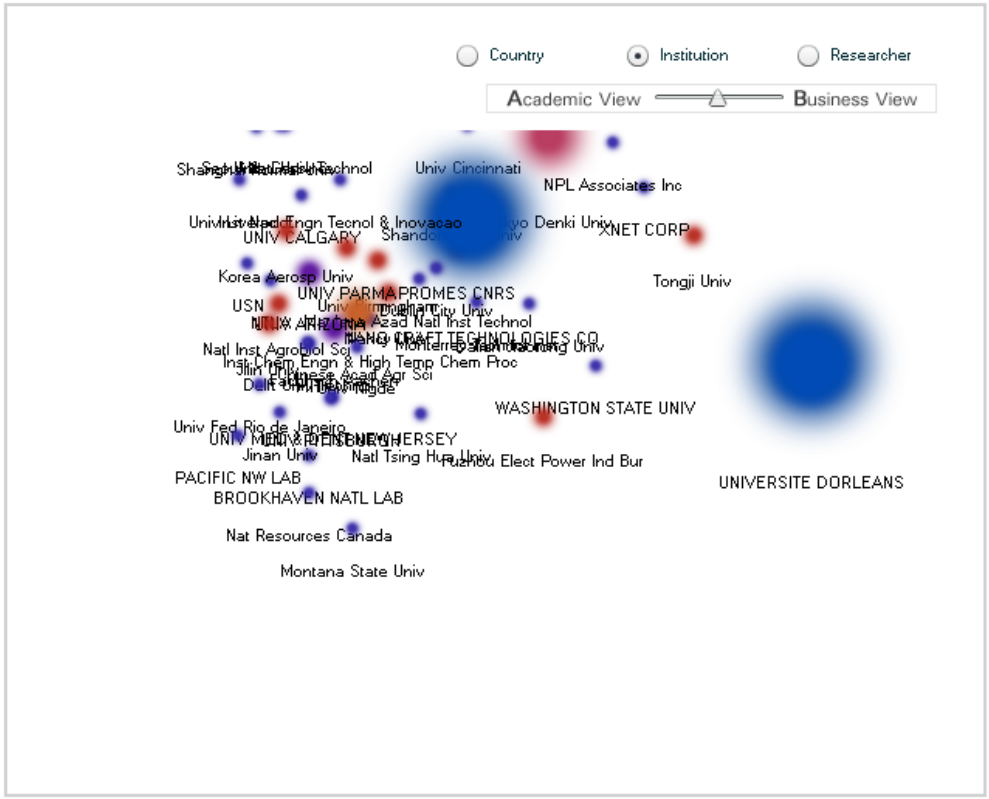
fuel cell Search ?

KOREAN | ENGLISH

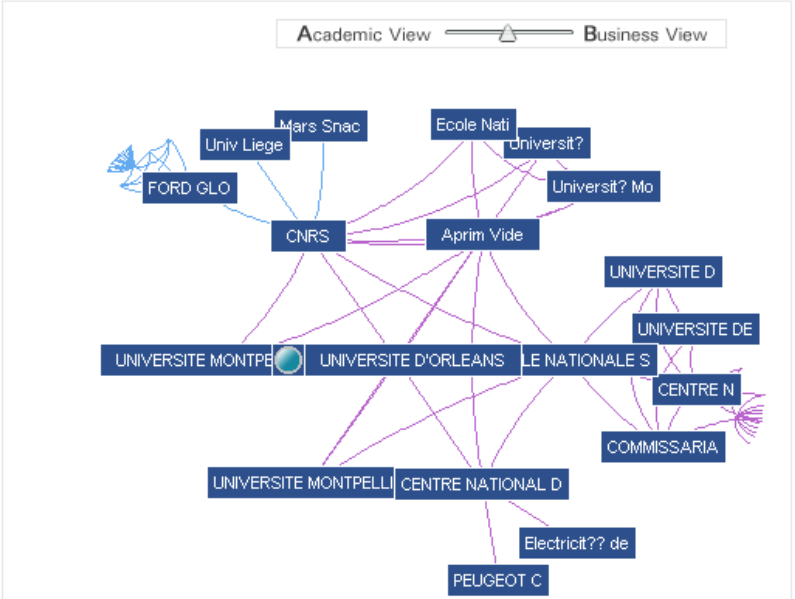
All Period 2001 - 2010 Search

Agent Network



UNIVERSITE DORLEANS

Institution Network



Map | Trends | Agent | Report

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Technology Report : **fuel cell**

Reporting Date : Feb. 02 2012

Definition

None

Trends

Year	Paper	Patent
2009	139	1096
2008	101	3754
2007	84	3069
2006	56	1723
2005	52	968
.	.	.
.	.	.
2001	12	14

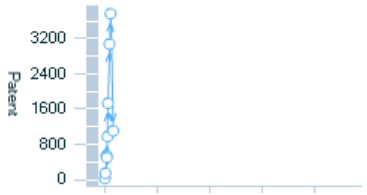
S Maturity Level : **Matured Technology**

: This corresponds to Stage 3 of the technology growth curve. R&D is reaching a highly advanced level, with numerous patents and papers being published on the basis of continuing research. Quantitative growth of the technology has slowed, but qualitative growth remains ongoing. At this stage, intensive investment aimed at attaining a competitive advantage is needed. Expected forms of technological development include the improvement of existing technology and the development of supplementary technologies.

Technology fuel cell is a matured technology, comprising 540 papers and 11794 patents. While R&D growth is beginning to slow of late, this may be interpreted as the sign of transition to advanced levels of development.

The overall direction of research on this technology is currently transitioning from 'Base technology research' to 'Application technology research' There is a greater emphasis on developing base technologies, and the results of such research may change the future prospects for this

Save



InSciTe

Institution Report : **Samsung SDI Co., Ltd.**

Reporting Date : Feb. 02 2012

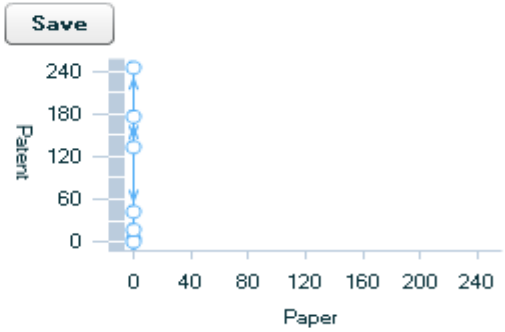
Institution Profile

Samsung SDI Co., Ltd. is a Korea-based company engaged in the manufacturing of digital display devices.

By OpenCalais, Linked Data

Major Technologies & Institution Trends

The main technology of Samsung SDI Co., Ltd. is Technology fuel cell, with 0 papers and 618 patents, and Technology fuel cell systems, with 0 papers and 512 patents.



The results of Technology Samsung SDI Co., Ltd. total 0 papers and 2532 patents, thus reflecting a particular focus on patent-oriented research. The research direction of this institution is transitioning from "Commercialization" to "Base technology research". It appears that research is being focused on base technologies, with the development of a new base technology currently underway.

Competing Institutions

The table below shows the level of major technologies of Samsung SDI Co., Ltd. compared with the competing institution's R&D results. Competing institution is the leading research institution in the major technologies area.

Technology		Samsung SDI Co., Ltd. (2642 researchers)	Competing Institutions	
Name	Maturity Level	Papers / Patents	Institution (No. of Researchers)	Papers / Patents
fuel cell	Matured	0 / 618	TOYOTA JIDOSHA KABUSHIKI KAISHA (1954)	0 / 836
fuel cell systems	Matured	0 / 512	Toyota Motor Corp	0 / 491