

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ



Science and Technology in

Islamic Republic of Iran



**TTEN High- council Meeting
October 7, 2013
Tehran- I.R.IRAN**



There are two issues
which are necessary for
us to pay attention to.

One is the issue of
Economy and another
is the issue of **Science**.

I.R.IRAN Supreme Leader

I.R.IRAN at a Glance



- Population: **78,868,711**
 - growth rate of 1.25%
- Area: **1,648,195 km²**
 - 18th largest country in the world
- GDP: **\$ 548.89 billion** (2012)
- Capital: **Tehran**
- Research Centers: **500**
- Universities: **1600**
- University Students: **+ 4.4 million**
- R&D Share: **4% of GDP**





Gross Domestic Product (GDP)



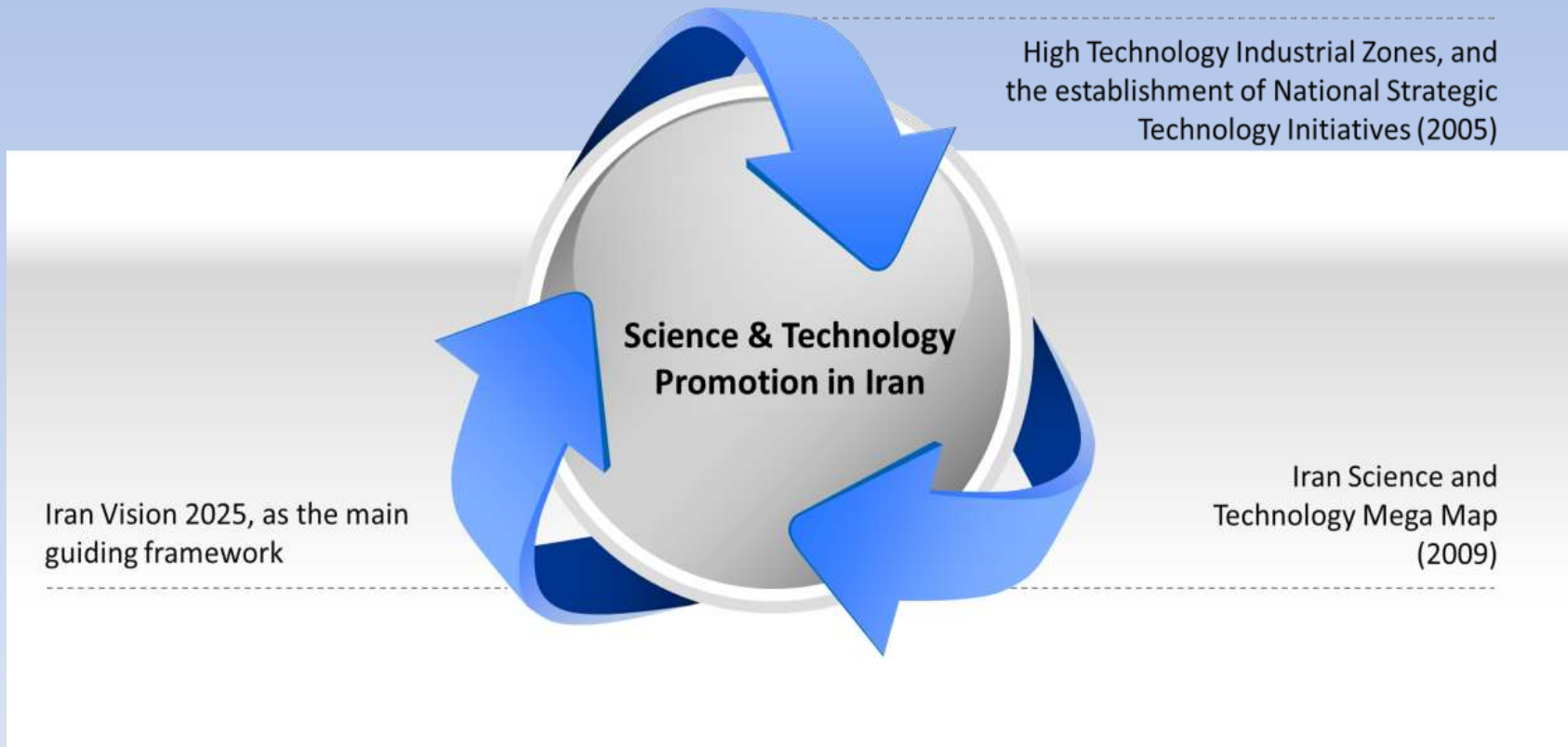
Background of S&T



- Medicine
 - Avicenna, Razi
- Mathematics
 - Khwarizmi, Khayyam
- Astronomy
 - Biruni
- Philosophy
 - Farabi, Ghazali



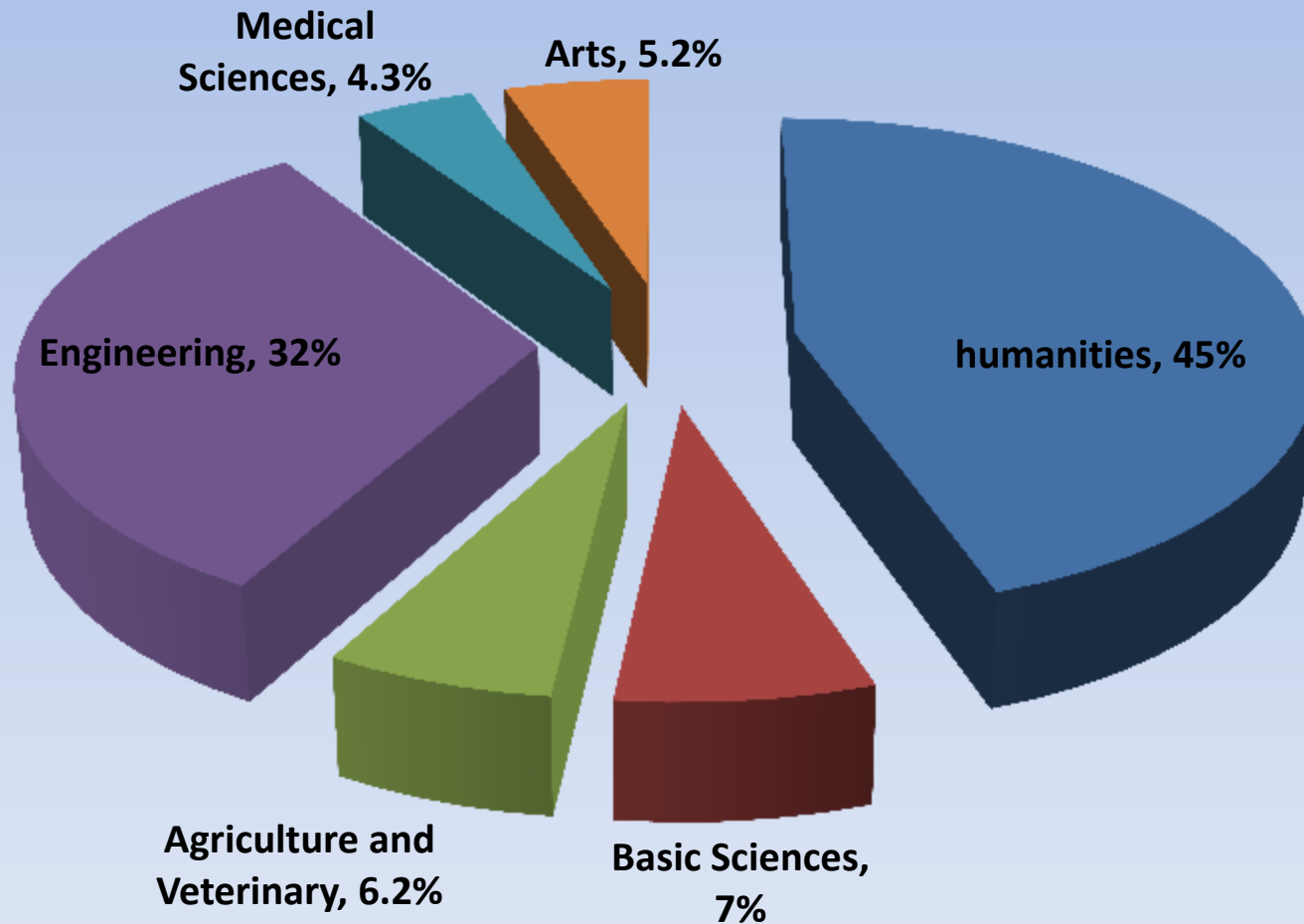
Main National Programs For S&T Promotion





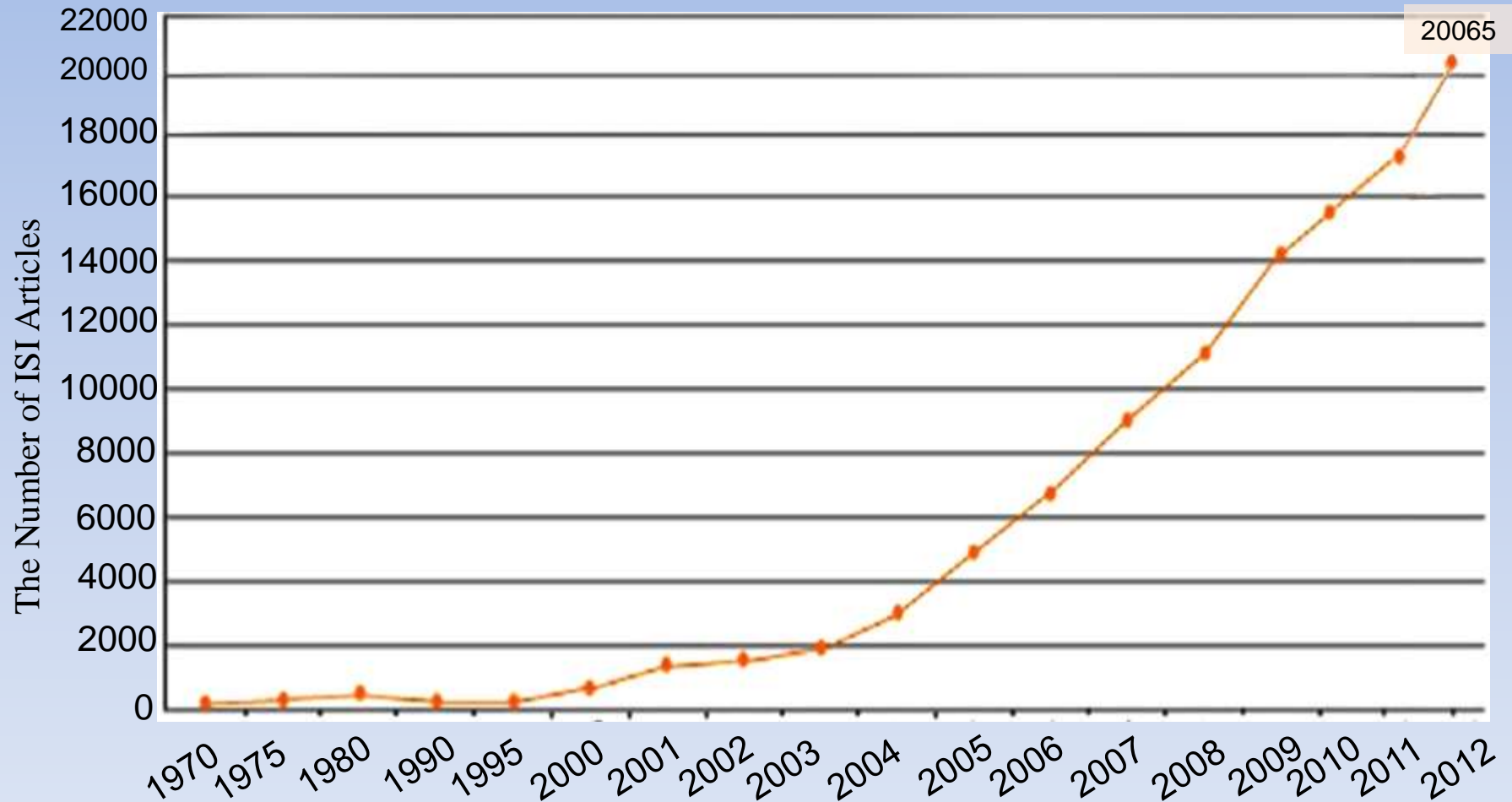
Rank	Country	No. of Research Papers Published in 2011	No. of Research Papers Published in 2012
1	United States	310206	311975
2	China	142645	159121
3	United Kingdom	90018	86544
4	Germany	82550	83216
5	Japan	68308	66820
6	France	57751	57320
7	Canada	49947	51107
8	Italy	47403	48353
9	Spain	43300	44935
10	South Korea	39285	41770
11	India	39640	40912
12	Australia	38607	40901
13	Netherlands	29296	30616
14	Brazil	27808	29924
15	Taiwan	24255	23592
16	Russia	22296	22340
17	Switzerland	21372	21796
18	Iran	17598	20065
19	Turkey	19753	19396
20	Sweden	18645	19421

University Students Variety



ISI Articles of the I.R.I

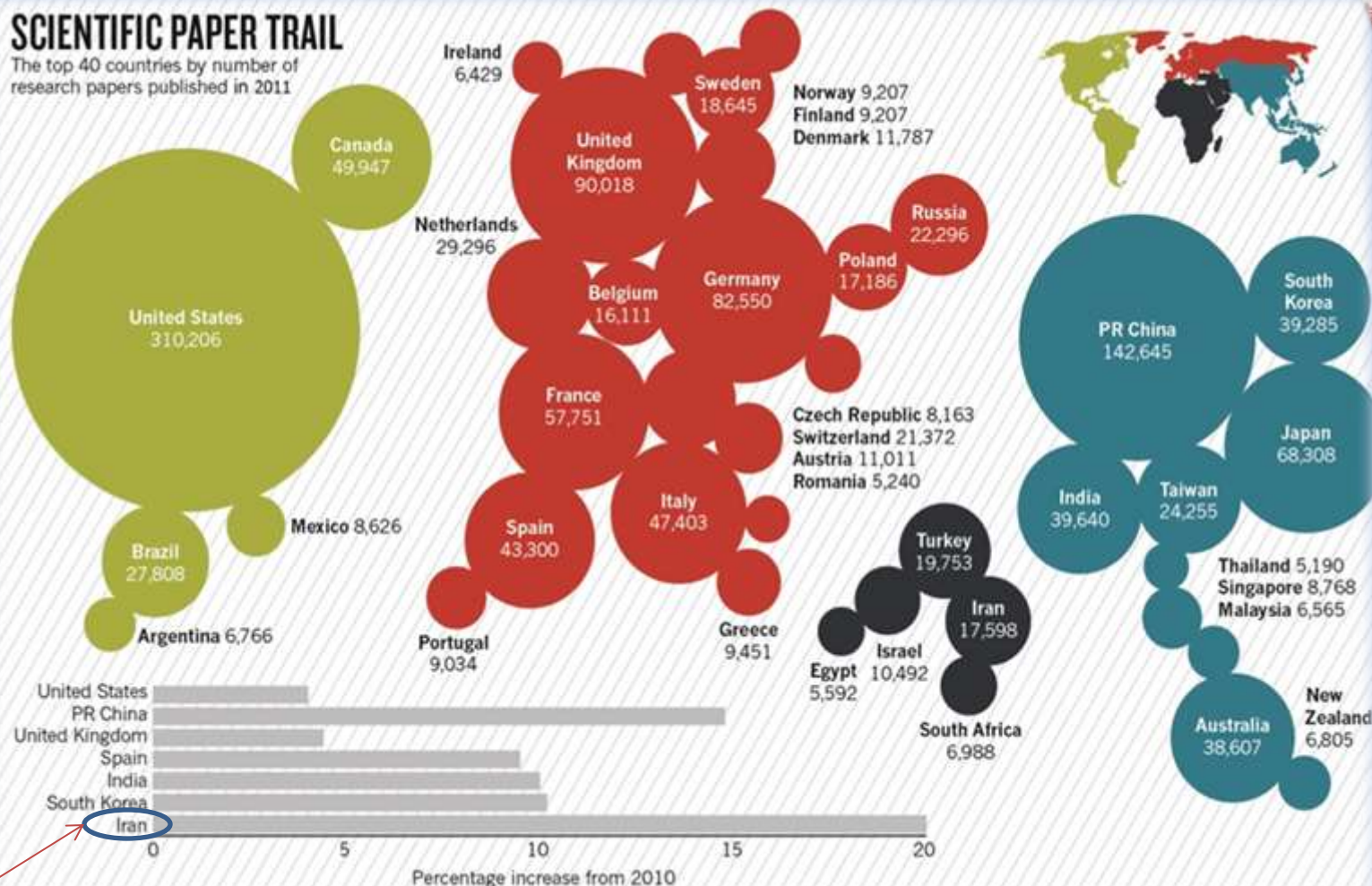
1970-2012



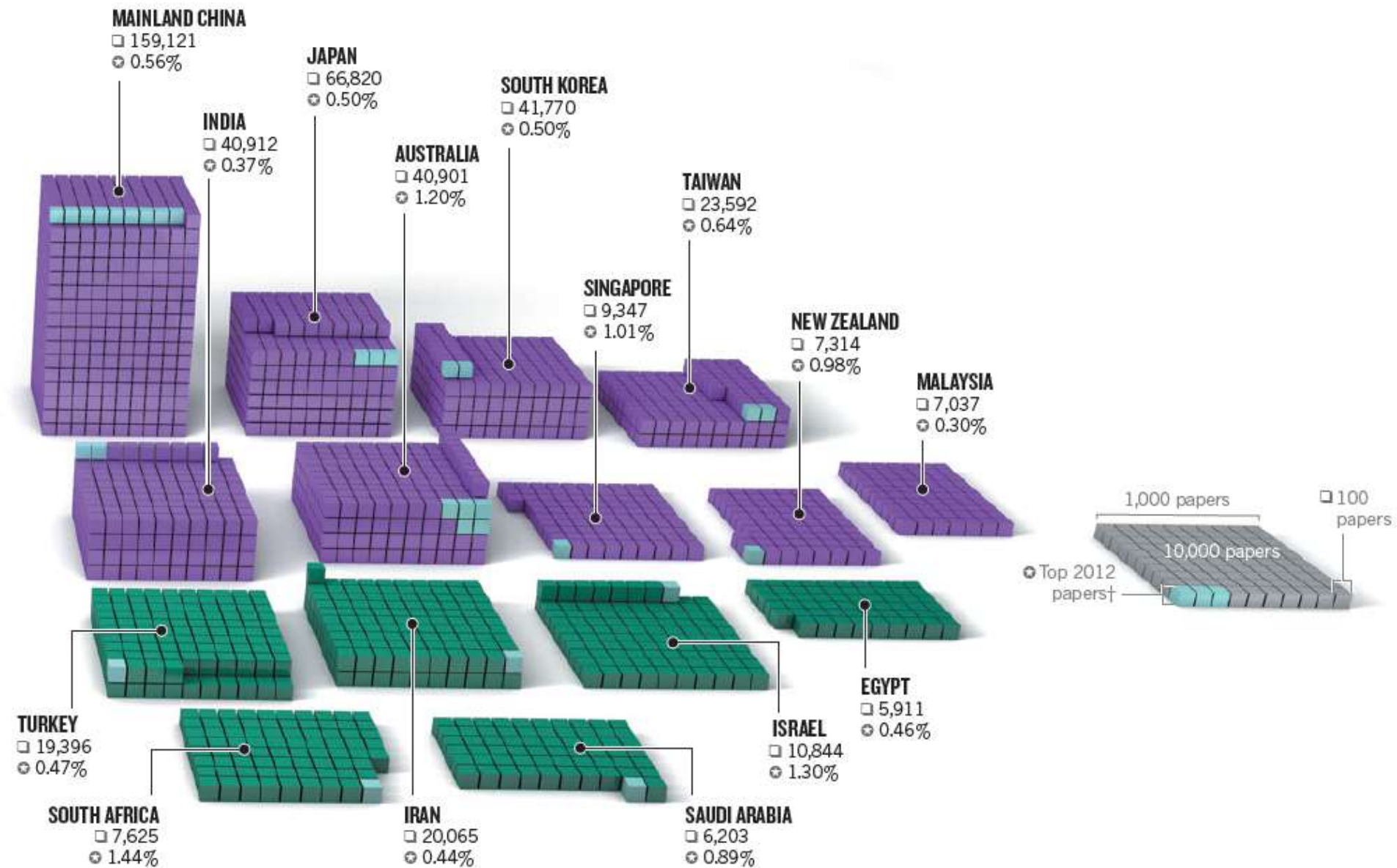


SCIENTIFIC PAPER TRAIL

The top 40 countries by number of research papers published in 2011



Iran had the fastest growth rate among all nations in 2011, followed by China, South Korea, Spain, United Kingdom and United States



SOURCE: THOMSON REUTERS/ESSENTIAL SCIENCE INDICATORS

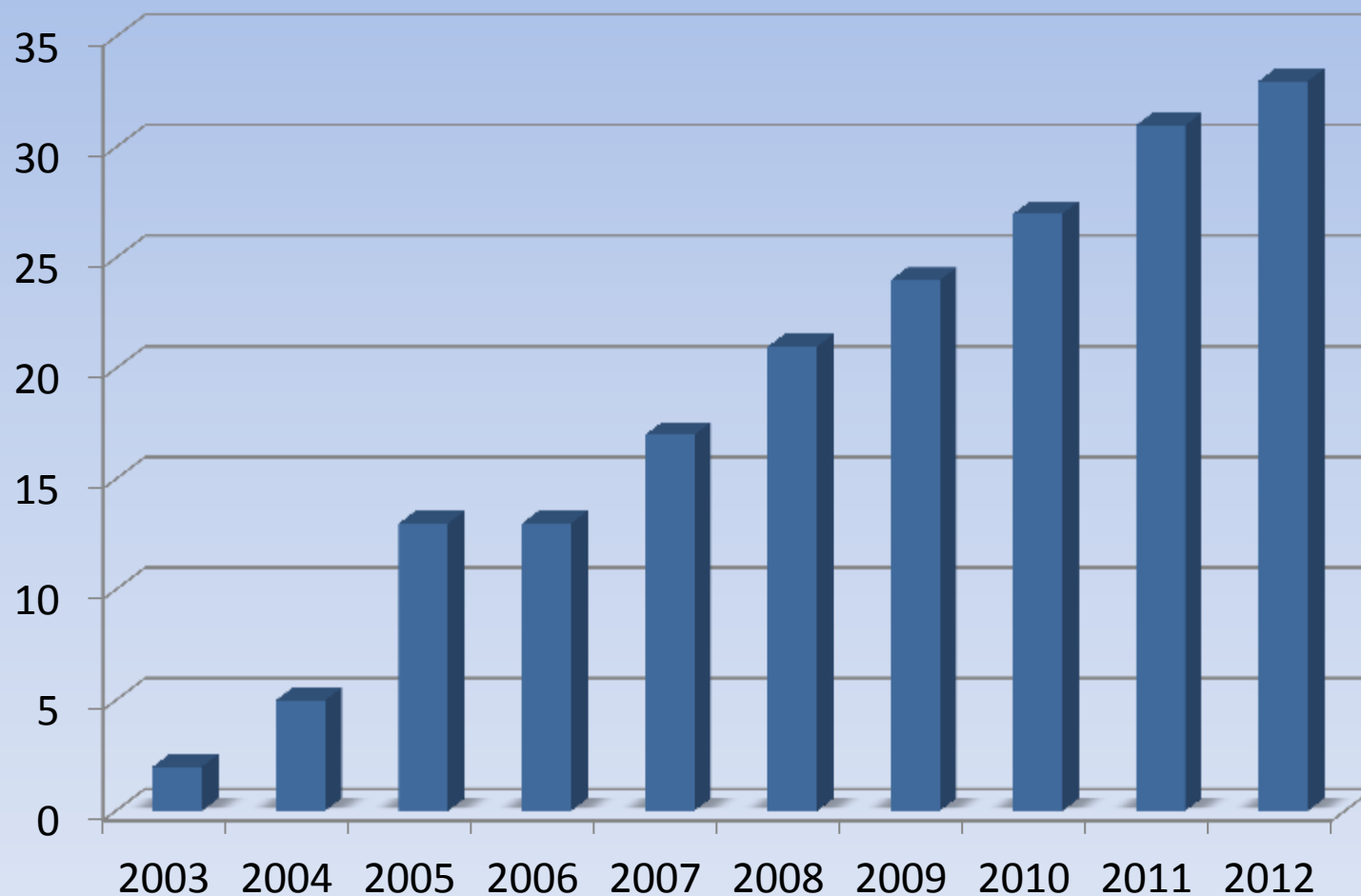
S&T Policy Makers



- Deputy of presidency in S&T
- Ministry of SRT
- High-Council of cultural revolution
- National Academy of Science
- National Elites Foundation
- CITC



Technology Parks in I.R.IRAN





Technology sectors rank in the world

Technology field	Rank in the World
Biotechnology	14
Agriculture and Biological Sciences	12
Nanotechnology	8
Materials Science	11
Energy Engineering and Power Technology	6
Fuel Technology	4
Renewable Energies, Sustainability and Environment	16
Electronics, Optical and Magnetic Materials	12
Aerospace Engineering	19

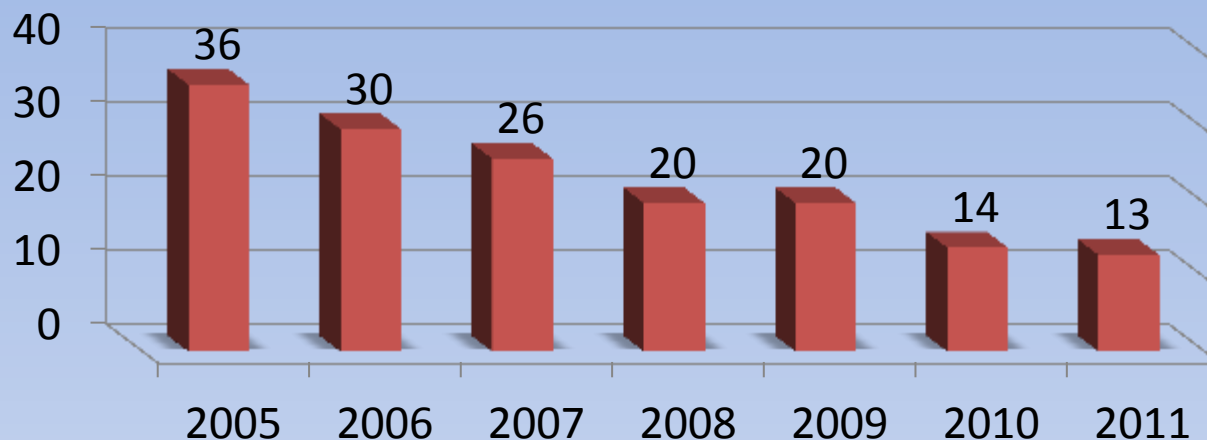


Biotechnology in Iran

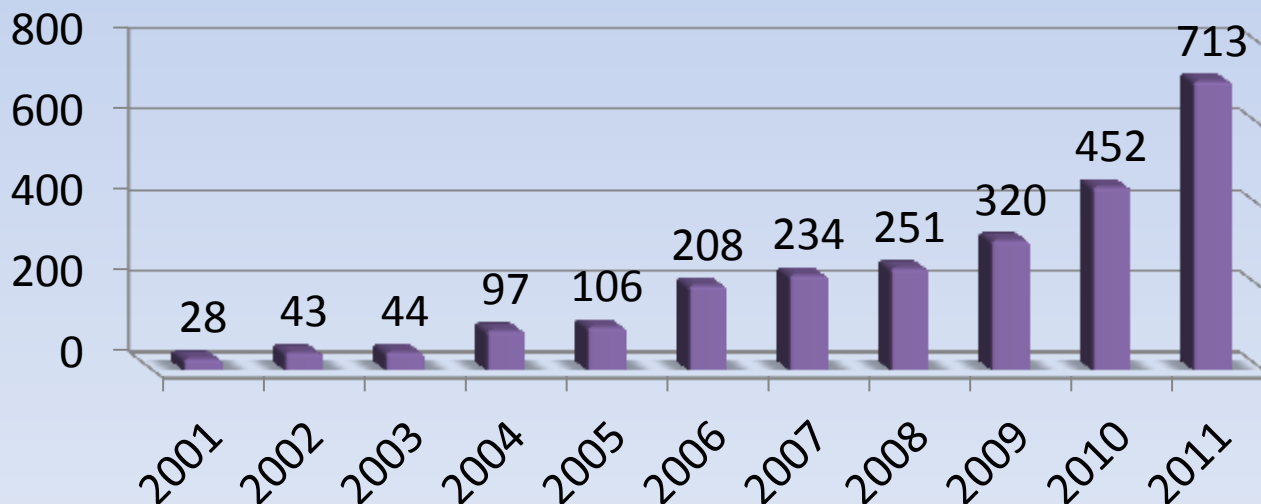




Bio ISI Articles Ranking



Bio ISI Articles Number



Bio Ranking in the world



Subject Category: **Biotechnology.**

Year: **2011.**



[Download data in MS Excel format](#)

	Country	Documents	Citable documents	Citations	Self-Citations	Citations per Document	H index
1	United States	4.952	4.589	10.033	5.504	2,03	290
2	China	4.356	4.158	5.014	2.917	1,15	105
3	India	2.262	2.175	1.245	529	0,55	93
4	Japan	1.583	1.533	1.507	620	0,95	134
5	Germany	1.549	1.455	2.685	973	1,73	176
6	South Korea	1.482	1.427	1.504	500	1,01	106
7	United Kingdom	1.104	1.025	1.833	541	1,66	153
8	Brazil	837	796	456	175	0,54	63
9	Canada	783	726	1.200	398	1,53	122
10	Spain	763	725	1.060	389	1,39	102
11	France	761	713	1.128	354	1,48	121
12	Italy	748	681	867	262	1,16	106
13	Iran	713	688	291	119	0,41	38
14	Australia	549	522	964	300	1,76	100
15	Turkey	509	492	244	72	0,48	63
16	Netherlands	461	428	819	288	1,78	129



Bio Ranking in the Middle East

Subject Category: **Biotechnology.**

Region: **Middle East.**

Year: **2011.**



[Download data in MS Excel format](#)

	Country	Documents	Citable documents	Citations	Self-Citations	Citations per Document	H index
1	Iran	713	688	291	119	0,41	38
2	Turkey	509	492	244	72	0,48	63
3	Egypt	177	165	73	26	0,41	34
4	Saudi Arabia	163	161	147	26	0,90	19
5	Israel	134	126	325	53	2,43	83
6	United Arab Emirates	21	21	20	3	0,95	18
7	Jordan	20	18	7	1	0,35	18
8	Iraq	16	16	2	1	0,13	6
9	Syrian Arab Republic	12	12	7	4	0,58	10
10	Qatar	10	10	22	1	2,20	6



Education in Biotechnology

Title	Number
Educational Programs	41
Students (PhD & MSc) per year	2700
Universities	120
Research Institutes	160
Professionals & Experts	Over of 2000

Research Projects in Biotechnology

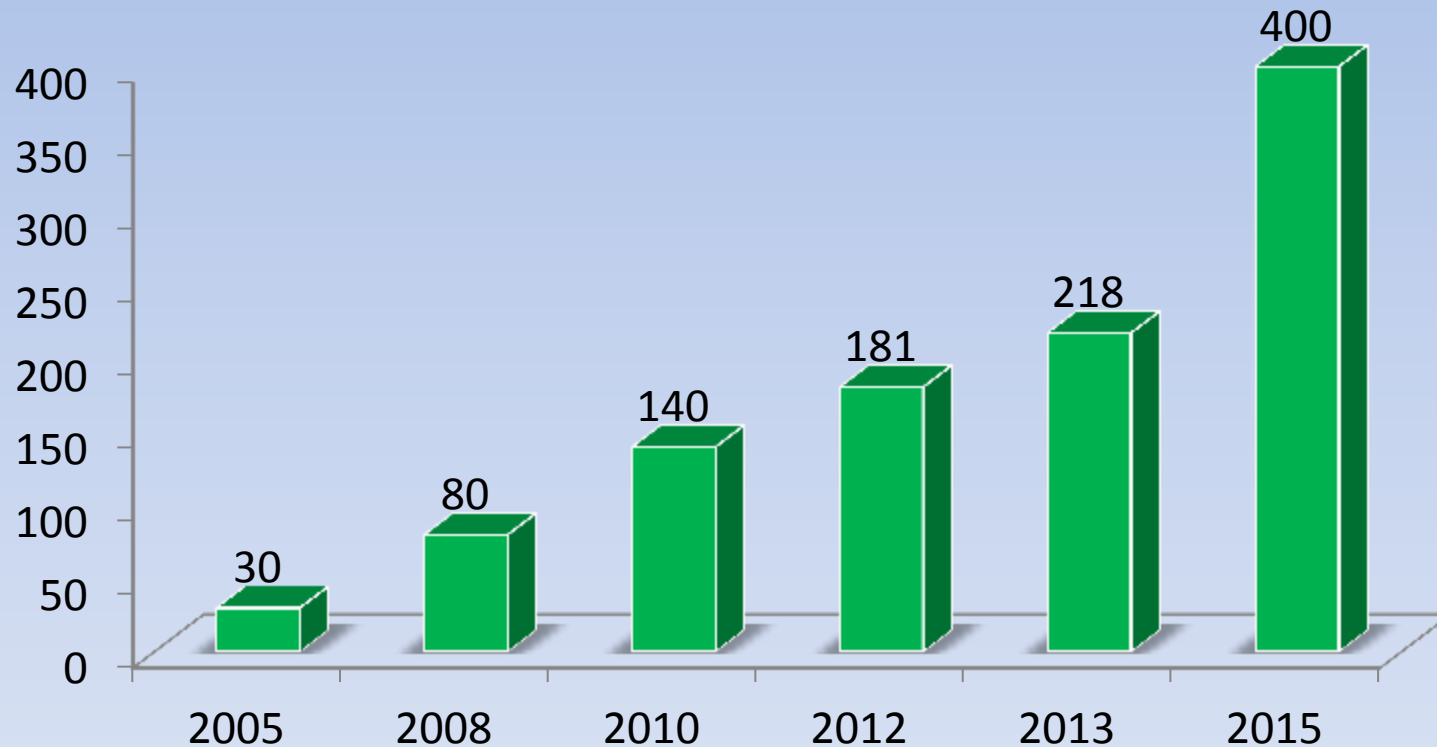
Subject	Projects in Demand	Finalized Projects	Total
Agriculture	210	433	643
Medical	110	360	470
Industry & Environment	140	432	572
Basic Science	100	226	326
Total	560	1451	2011



Facts of Biotechnology in Iran

Title	Number
Private Companies	218
Private Companies (In Incubators)	77
Scientific Societies	7
Policy Maker Committees	5
Products in the Market	160
Market Value (Million \$)	902

Bio-Tech Companies in I.R.IRAN



Brilliant Achievements



- **ANGIPARS™**
 - a novel drug for management of diabetic foot ulcer and prevents amputation



Brilliant Achievements



- **IMOD™**
 - Medicine for treatment of HIV/AIDS.
- **CinnoVex™**
 - trade name for recombinant Interferon beta 1-a which is used in the treatment of relapsing Multiple Sclerosis (MS).



Brilliant Achievements



- **Pegaferon®**
 - Recombinant Pegylated Interferon alfa-2a
 - Treatment of chronic hepatitis C and chronic Hepatitis B

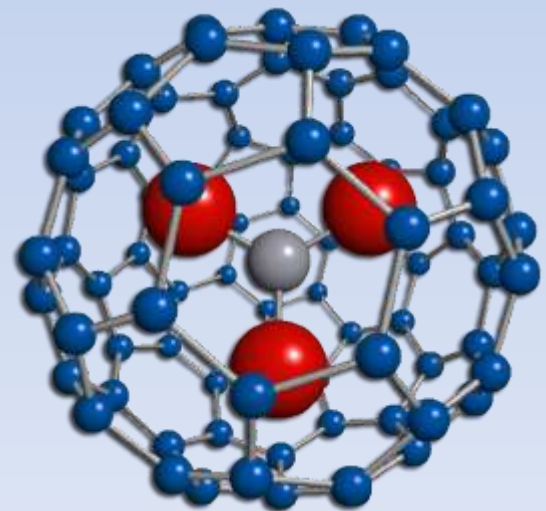


- **Hepatitis B Vaccine**





Nanotechnology in **Iran**



Nanotechnology Overview



No. of Students: More than 13,000

Total No. of Projects: 12399

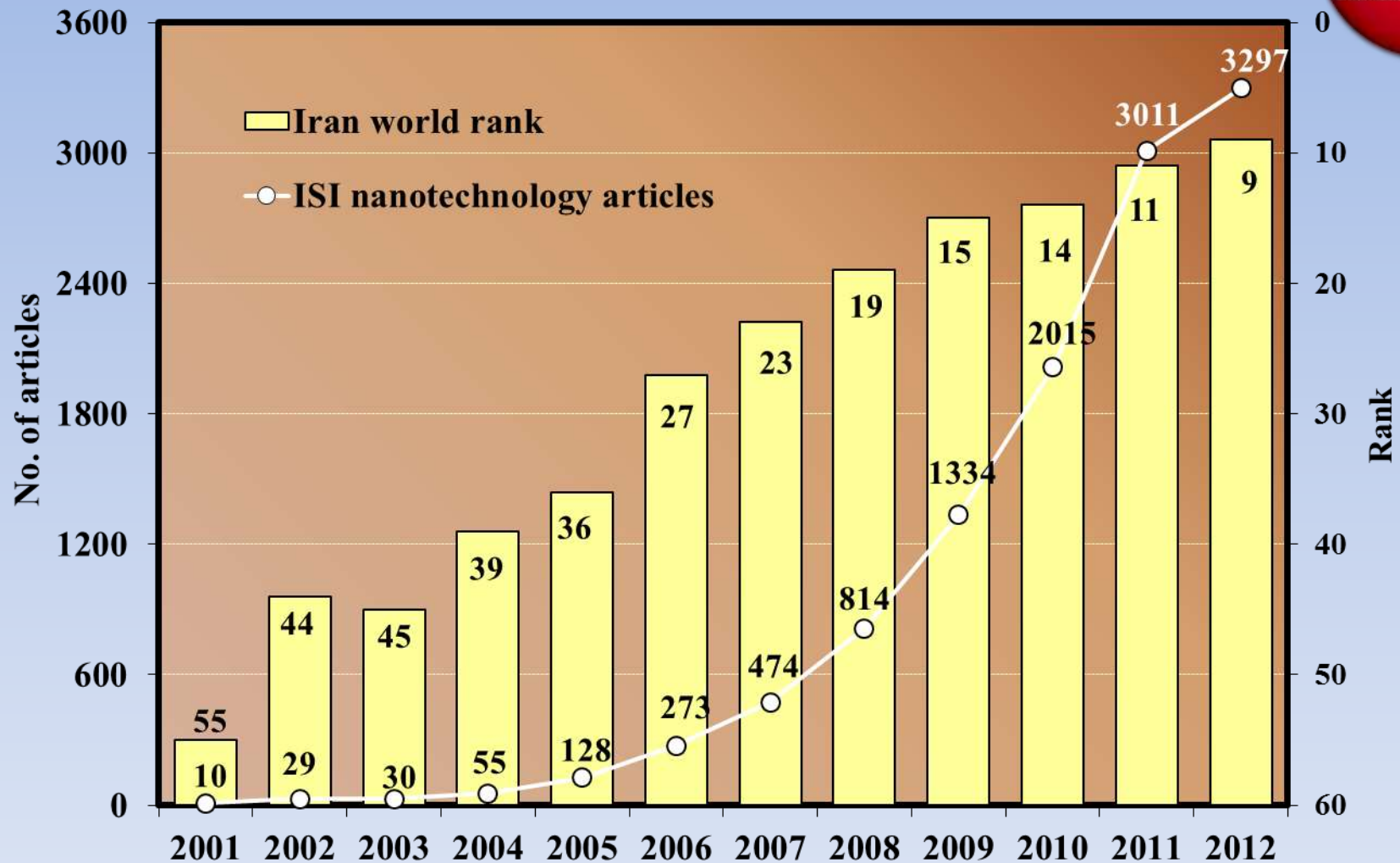
No. of Start Up Companies: 101

No. of Manufacturing Companies: 245

120 Published Titles

110 Patents in US & EPO

ISI Publication (2001-2012)



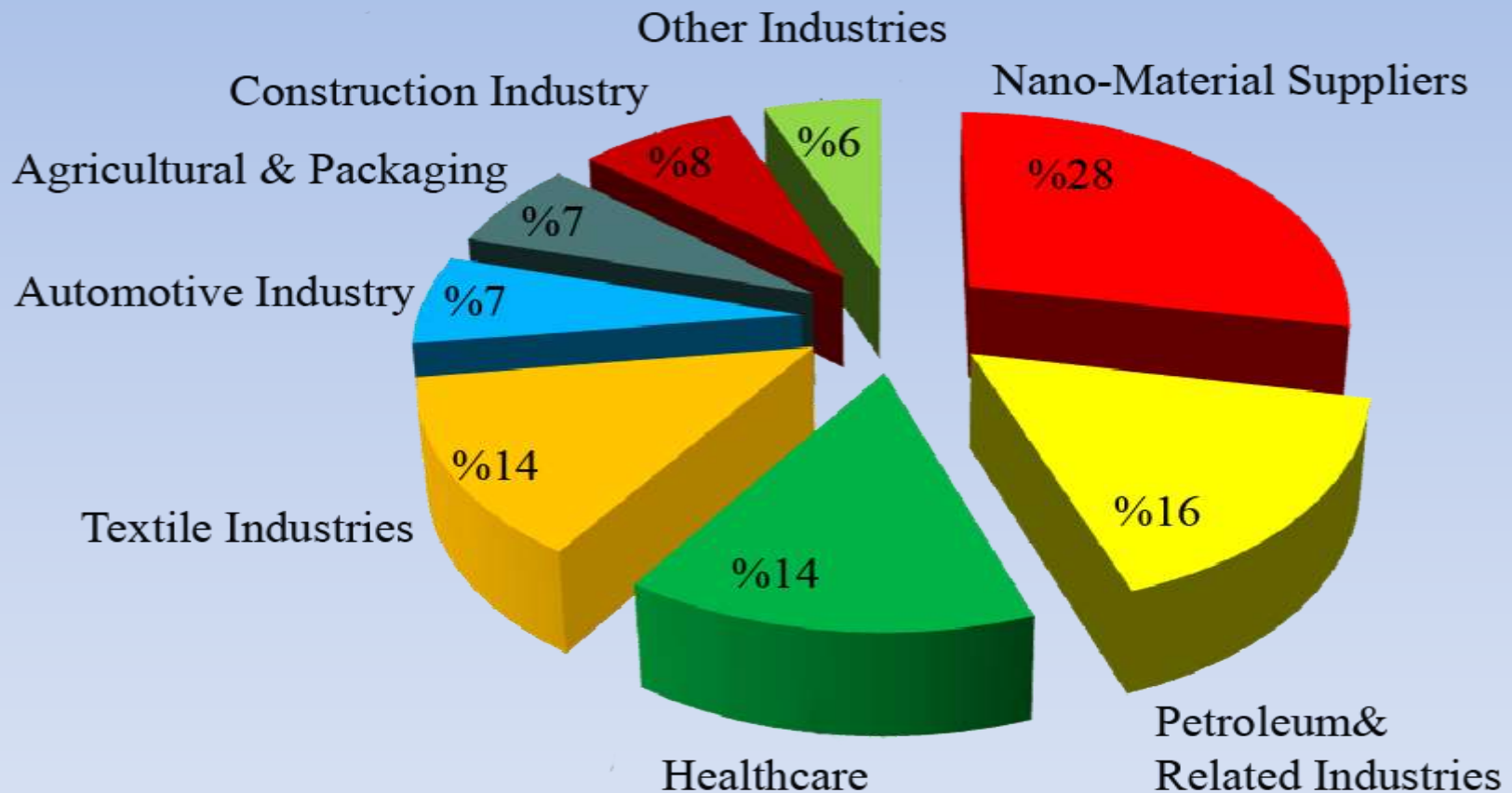
No. of ISI Papers

(End of December 2012)



Rank	Country	Nano-article	Share	Rank	Country	Nano-article	Share
1	China	25782	27.72%	16	Singapore	1835	1.97%
2	USA	18140	19.51%	17	Switzerland	1411	1.52%
3	Germany	6339	6.82%	18	Brazil	1398	1.50%
4	South Korea	6309	6.78%	19	Poland	1288	1.38%
5	Japan	6116	6.58%	20	Netherlands	1221	1.31%
6	India	5509	5.92%	21	Sweden	1128	1.21%
7	France	4362	4.69%	22	Turkey	945	1.02%
8	UK	3313	3.56%	23	Belgium	941	1.01%
9	Iran	3297	3.55%	24	Saudi Arabia	834	0.90%
10	Spain	3199	3.44%	25	Malaysia	816	0.88%
11	Italy	2945	3.17%	26	Portugal	743	0.80%
12	Taiwan	2838	3.05%	27	Israel	677	0.73%
13	Russia	2507	2.70%	28	Romania	637	0.68%
14	Canada	2406	2.59%	29	Finland	627	0.67%
15	Australia	2097	2.25%	30	Austria	619	0.67%

Nanotechnology Companies





Priorities in Nanotechnology

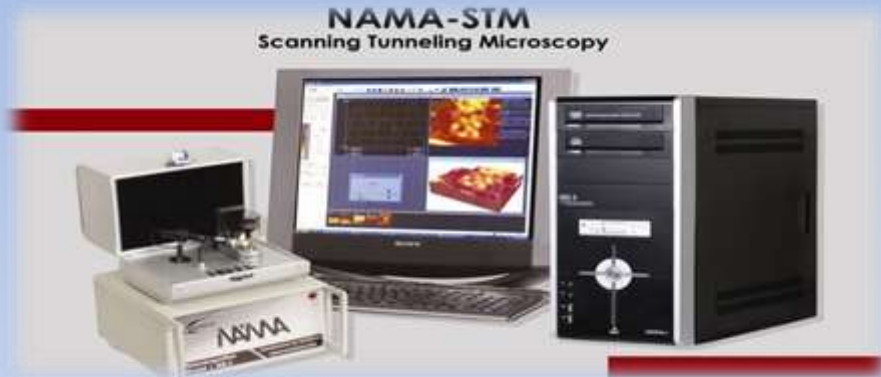
- Energy (Oil, Gas & Petrochemicals, Solar Cells)
- Health (DDS & Diagnostic Kits)
- Water and Environment
- Construction



Brilliant Achievements



- **Scanning Tunneling Microscope (STM)**



- **High Resolution Animal SPECT Imaging System (HiReSPECT)**



Brilliant Achievements



- Atomic Force Microscope (AFM)
- Ion Mobility Spectroscopy (IMS)





ICT in Iran



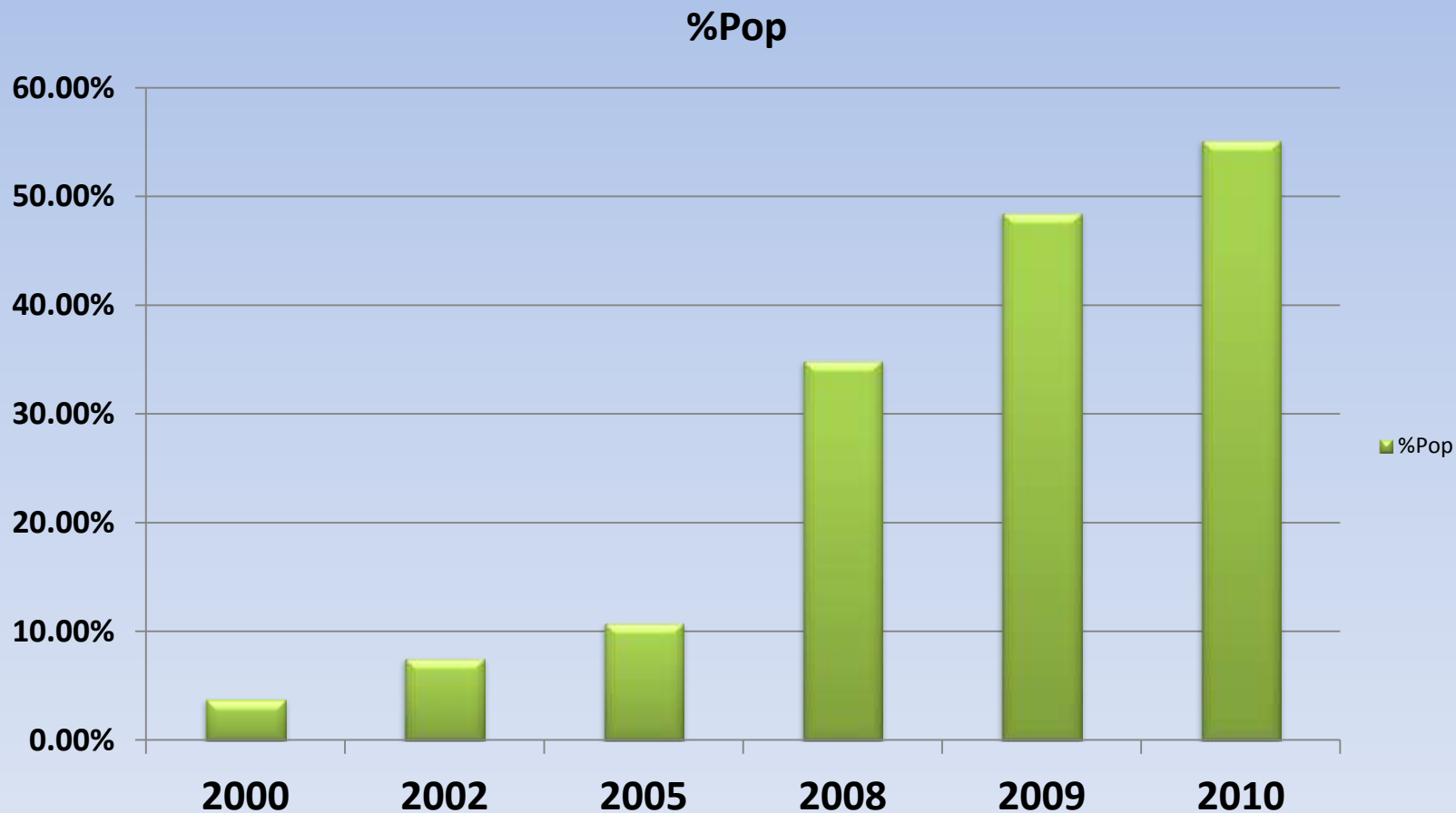


ICT Overview

- 1,223 ISP's
- +24 million internet users
- 12 \$ billion market (2011)
(4th largest market in the region)
- Ranks 32nd in the world in the term of websites
- +120,000 km fiber optic network
- Growth rate of over 20% in telecommunications
- 8th rank in the Middle East & Africa
(according to the IT industry competitiveness index)
- Expectation for grow to 12.9 billion by 2014



% of Internet Users





Indexes for ICT Infrastructure

Developing Countries	Business	Consumer	Government
Brazil	50	64	85
China	23	69	48
India	6	24	39
Iran	17	53	32
Malaysia	60	77	78
Russia	52	93	51
Turkey	59	77	80
South Africa	56	52	74

Brilliant Achievements



- Electrosurgical Unit



- Patient Monitor System



Brilliant Achievements



- VHF-UHF Amplifier
- DVB-T & Switches





Renewable Energy in **Iran**





Potential of Renewable Energy in Iran

- Fuel Cell and Hydrogen
- Solar
- Wind
- Geothermal
- Green Vehicle and Transportation
- Biomass





Taleghan Renewable Energy Park



**Center for H₂ & FC technology demonstration and other kind
of renewable energies**

Best Wishes
for you
in
I.R.IRAN

