Welcome

to the Frantsevich Institute of Materials Science Problems in Ukraine.

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Founded in
1952
on a territory of Kiev-Pechersky Monastery

Founder and First director - Academician

Ivan Frantsevich

Since 1952
the IPMS was working in part over defense related problems

Materials and parts for sub-marines and ships

Until 1991 IPMS was a headquarter center for powder metallurgy & composite materials in the former USSR

Vehicle and body protection armored systems

development materials and parts for ballistic missiles and aircrafts

Now we confess a non-proliferation and conversion strategy !

IPMS OVERWIEW

Main directions of research in the Frantsevich Institute for Problems of Materials Science NAS of Ukraine

I. **Physicochemical fundamentals of materials science**; phase equilibrium research, surface and contact phenomena in the multicomponent systems; hydrogen technologies of synthesis and treatment of materials;

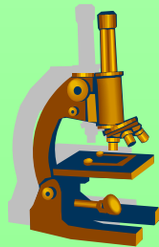
II. **Physical metallurgy, physics of strength and plasticity**; structure engineering of structural materials with extreme specific strength; computer modeling of materials structure;

III. **Materials science of high melting compounds and high pressure phases;** high melting point, superhard and functional non-oxide and oxide ceramic materials on their basis;

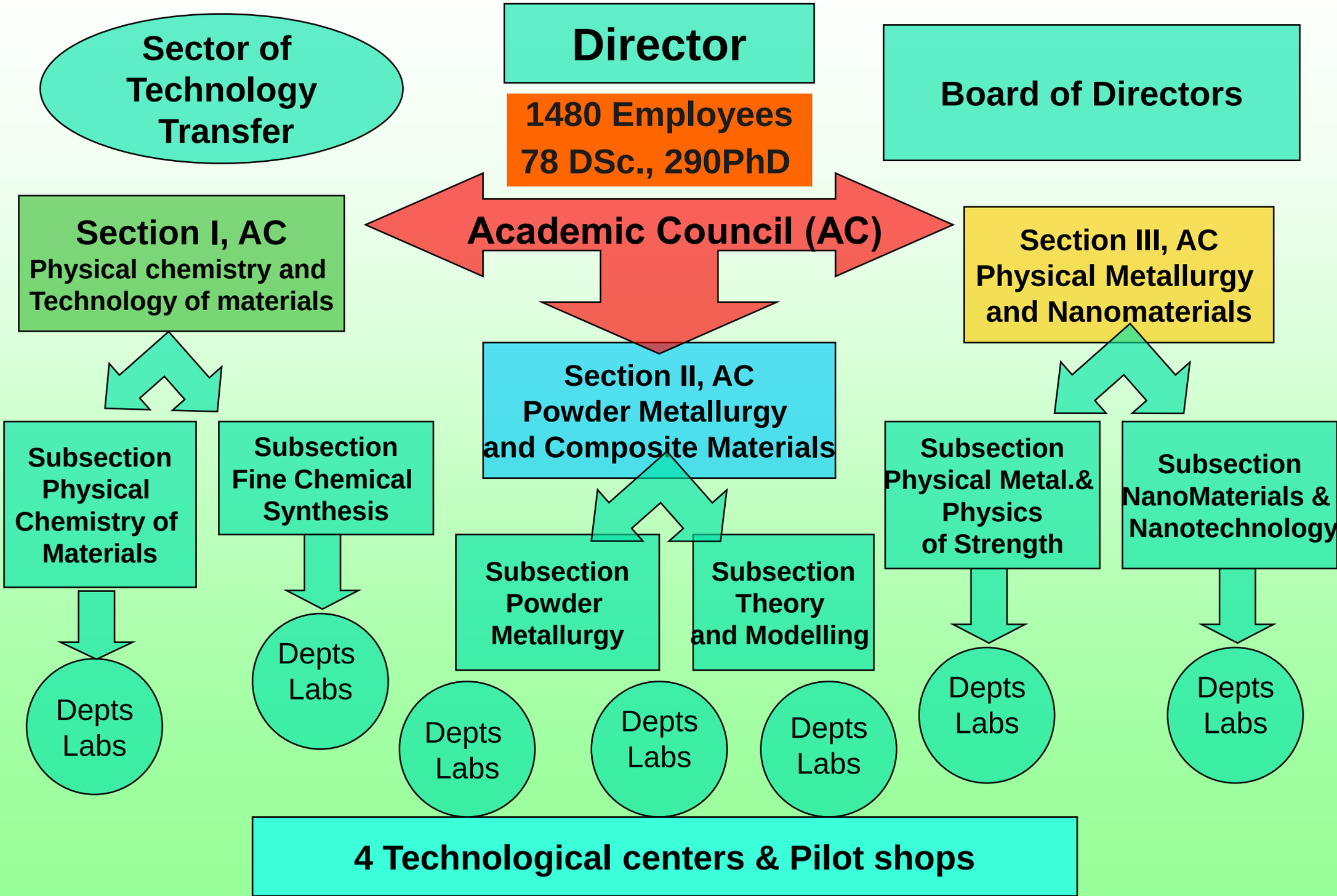
IV. **Novel powder metallurgy processes and technologies;** computer engineering modeling and optimization of technological processes; sintered metallic and composite materials and powder coatings with given properties for various applications;

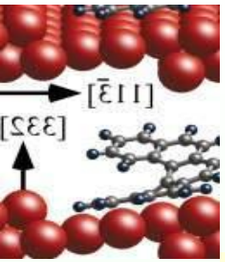
V. **Nanostructured materials;** synthesis and characterization of new nanostructures, study of size effects, technology development.

VI. **Materials for Hydrogen energy engineering systems;** hydrogen production, storage, applications



Organizational structure of the basic research institute



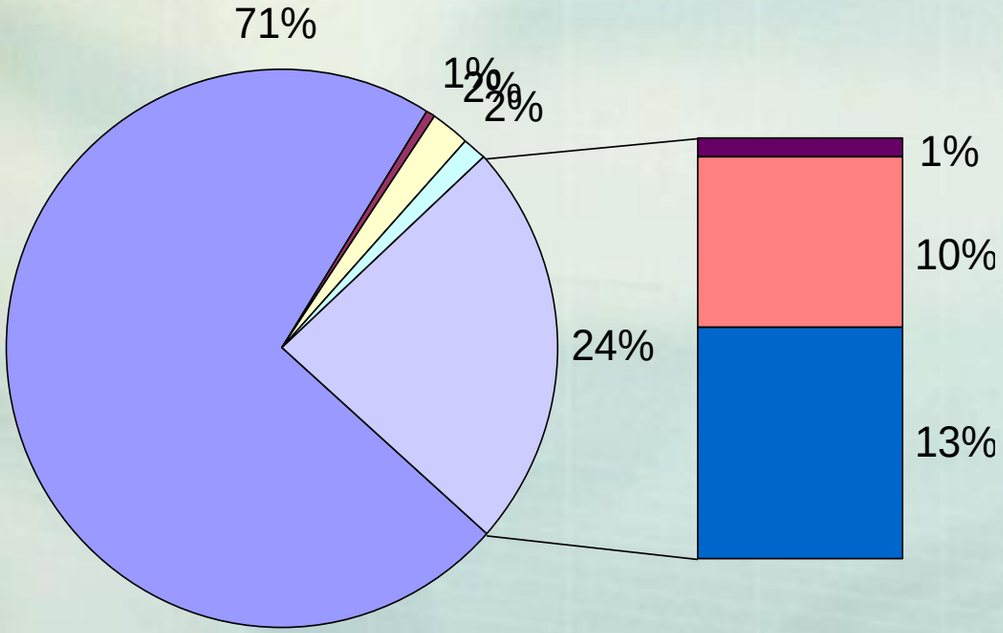


Scientific and technological facilities

- **40 departments** have well-equipped laboratories;
- **4 technological centers** concentrated on small batch production;
- Equipment is gradually renewed, for instance: HRTEM JEOL 2100F, VG9000 mass spectrometer, Zetasizer, Micro-nanoindenter, Furnaces, various testing installments;
- Several laboratory-scale and pilot-scale technologies are of the World-class ones, but the main part of them corresponds to the level of 90th;
- **Computer network of 340 PC** connected in 4 local net loops with 6 servers but **all needs modernization**.
- There is an **electronic library** of journals and abstracts – the powerful resource accessible from each PC of intranet.
- **Large work area – 81000 m^2, including 4 pilot plants of 2000 m^2 each equipped with technological units and communications**

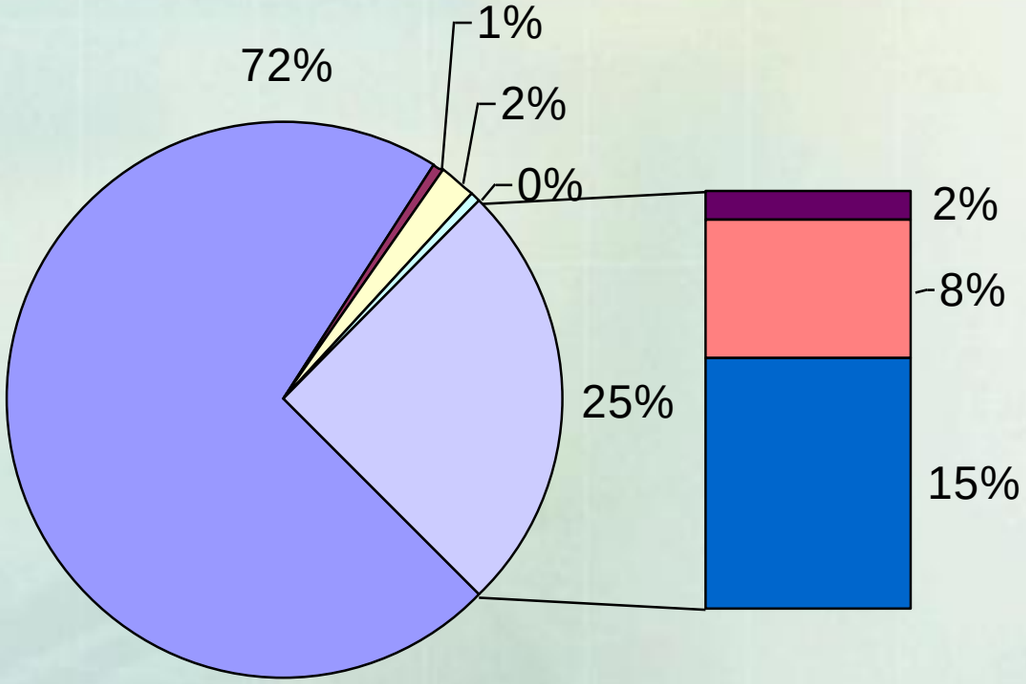
Budget growth in 2007-2010.

2007 - 10 289 406 USD



- BUDGET NASU - 6707,200
- MES of Ukraine - 56,990
- GOVERNMENT Contractual - 199,901
- INDUSTRY Contracts - 144,020
- FOREIGN Contracts - 105,505
- INCOME from Leasing - 887,901
- Grants - 1198,020

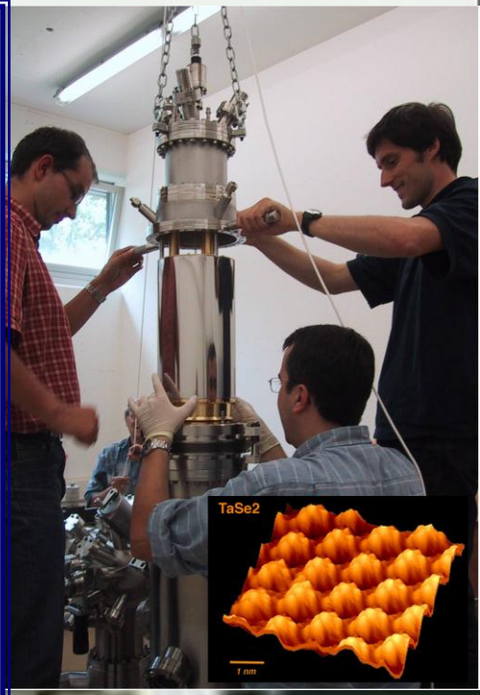
2010 – 14 558 071 USD

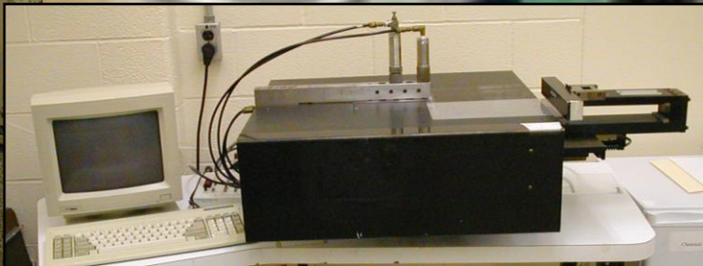


- BUDGET NASU - 10452,200
- MES of Ukraine - 74,257
- GOVERNMENT Contractual - 324,752
- INDUSTRY Contracts - 60,683
- FOREIGN Contracts - 274,026
- INCOME from Leasing - 1199,110
- Grants - 2173,070

International grants in 2010

Source/year	2010	Total USD
STCU	22	800 000
EARC	1	100 010
NATO	2	300 100
FP7 of EU	3	973 060
TOTAL	42	2 173 070





IPR portfolio

	2005	2006	2007	2008	2009	2010
Number of valid patents	81	87	132	164	182	192
- efficient models	4	4	36	57	73	77

Field of IPR	Number of patents
Nanomaterials and Nanotechnology	13
Coating technologies	15
Powder Metallurgy	42
Composite Materials	9
Application of Radiant Energy	11
Teratology of Materials	10
Basalt technologies	19
Materials for Medical Applications	9
Parts for electrical engineering	7
Testing techniques	15

You are kindly invited to work on IPMS materials research and development platform!

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