MĂGURELE - the research and development town

Măgurele is a town situated in the southwestern part of Ilfov County, Romania. Its population is 9,200. Four villages are administered by the town: Alunişu, Dumitrana, Pruni and Vârteju.

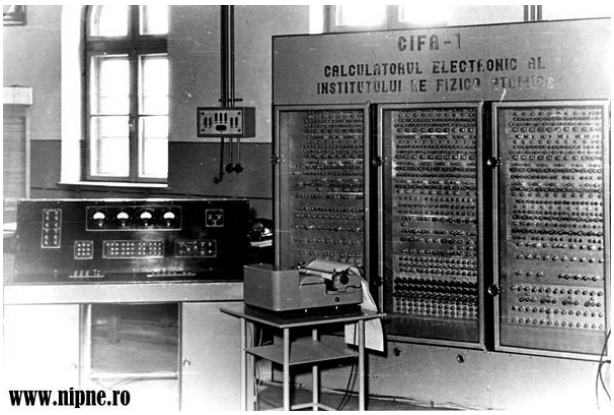
Authorities want to transform the rural area with Magurele into a socio-economic centre that will create development and innovation based on the Silicon Valley model. Will become in a few years the Laser Valley – Land of Light, the main Romanian innovation centre and a smart city that will centralize fundamental research, but also draw together start-ups from cutting edge technology.

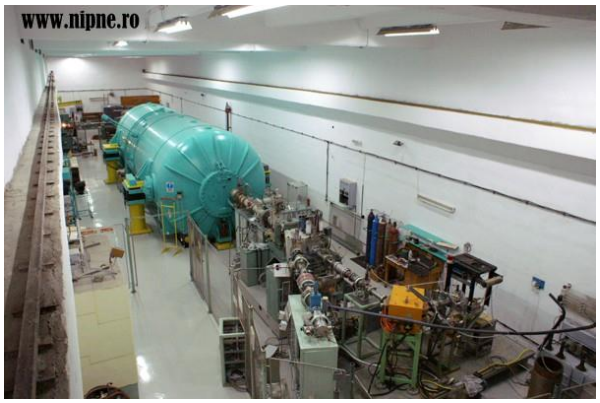
The town hosts the "*The Institute for Lasers*", where the most powerful laser in the world is to be built – a system with two arms of 10 petawatts, equivalent to 10% of the Sun's power each. In addition, the platform includes a high-intensity gamma system, the two components allowing experiments that could not be conducted until now.

The National Institute for Laser, Plasma & Radiation Physics (INFLPR) is an independent, national importance research institution established by the Government of Romania. INFLPR was founded in 1977, with the mission to advance the knowledge in several strategic areas of the sciences and technologies related to laser, plasma, and radiation physics. In 1996 INFLPR was reorganized to include the Institute of Space Sciences (ISS). ***The main domains*** of the activity are: high power lasers and applications, bio/nano photonics & nanomaterials, plasma research for fusion, space related sciences and technology, applications of space communication techniques.

Another important platform that we can found here is the Integrated Centre for Advanced Laser Technologies (CETAL) within the National Institute for Laser, Plasma & Radiation Physics (INFLPR) which was inaugurated in octomber 2014.

The Institute of Physics of the Romanian Academy was established in Bucharest September 1, 1949. Its founding father, Horia Hulubei (1896-1972), had earned his doctor's degree in Paris under Nobel Prize winners Jean Perrin and Marie Curie. On Hulubei's initiative and with his direct support, IFA specialists designed their first electronic computer, a premiere in the Soviet bloc countries, in 1956. The first device, CIFA1, working at a rate of 50 instructions per second, was put into operation a year later. The first Romanian laser, a He-Ne infrared device developed by Professor Ion I. Agarbiceanu and his team, came on stream October 20, 1962. A few months on, the achievement was reported at the 3rd Quantum Electronic Congress that was held in Paris in February 1963.





The National Institute for Materials Physics (NIMP) Bucharest is devoted to fundamental and applied research and development, with particular emphasis in the fields of solid state physics and materials research. NIMP develops as a CENTER OF EXCELLENCE for international cooperation (R&D projects and networks with support for EU, bilateral agreements) and high-level education (PhD, MSc, training courses) and provides a frame for interdisciplinary research in the materials science.

The National R&D Institute for Optoelectronics – INOE 2000 was established in 1996 by Governmental Decision – HG 1196/1996. The Institute develops fundamental and applicative research in optoelectronics, analytical chemistry and mechanical engineering, aligning itself to the vital scientific directions of the European Research Area.

The Institute comprises six research departments, two certified test laboratories and two legal subsidiaries: the Institute of Analytical Instrumentation Research - ICIA and the Hydraulics and Pneumatics Research Institute – IHP.

The Romanian Atmospheric 3D research Observatory–RADO is a distributed atmospheric research infrastructure based on the voluntary association of several research institutes and universities in Romania. Its main function is to perform experimental and theoretical research for atmospheric composition and air quality assessment, including impact on climate and climate variability.

Also *COMOTI* has a Research and experimentation center in the field of acoustics and vibration on Măgurele Platform. In this field the acoustic team can realize noise and vibration measurements, complex analysis and post-processing and also noise mapping according to 49/EC/2002 Directive.