AUTORITATEA NAȚIONALĂ PENTRU CERCETARE ȘTIINȚIFICĂ

Anexa nr. 2 la Decizia nr. _____ din ___/___/2011

The structure of the research unit by research teams at the date of the submission

N°	The name of the research team	Team leader	Number of full researchers CS* (1)	Number of engineers and technicians IDT* (1)	Research subjects for each team (max 150 characters each)				Number of doctoral students at the date of the submission	Labels of all ongoing* research contracts supporting the team members at the date of submission (3)	Labels of the most significant 10 scientific publications of the team in the period 2007-2011 (2)	Labels of the most significant 15 publications of the research unit in the period 2007-2011 (2)
Case of a research unit formed of a single team. →										CF#, CF#, CF#, …		
Case of a research unit formed of multiple research teams: please fill in the section below.												
E1	**Nanobiotechnology Laboratory**	Mihaela-Silvia Kusko	8.00	1.00	*Functional nanomaterials* - preparation, characterization and appropriate surface functionalisation of nanoparticles and nanocomposite materials or multilayer structures.	*Nanomedicine* - study, design and fabrication of nanoscale structures and devices for the diagnosis, treatment, and prevention of diseases.	*Nanotoxicology* - research addressing the *health risks* of these new materials, nanomaterials and/or nanoproducts, in order to underpin their safe use.	*NEMS / MEMS area* - design and fabrication of new complex devices on silicon or polymers, for applications in many interdisciplinary areas, from biomedicine to energy harvesting.	3	CF8, CF16, CF29, CF30	A1, A2, A3, A8, A10, A11, A16, A18, A19, A20	A1, A19, A38, A41, A43, A64, A73, A74, A90, A92, A93, A106, A117, A128, A130
E2	**Microsystems in biomedical and environmental applications Laboratory**	Carmen Aura Moldovan	10.50	1.00	Simulation and modelling for MEMS devices (mechanical, thermal, electrical and coupled multiphysics simulations) and microfluidics	Biosensors (microarrays, ISFET, microelectrodes microprobes for electrical recording/stimulation of cells), chemoresistive, resonant gas sensors, and mechanical sensors	Microfluidic platforms simulation and fabrication (microfluidic components, interfaces and external pumps, reservoirs, tubes); Electrical interfaces, Data acquisition and GUI	Multiparametric Sensors Platform and Sensor Networks (bio, chemo and mechanical sensors) for biomedical and environmental applications on silicon, plastic or piezoelectric substrate	3	CF15, F167*	A29, A30, A31, A32, A33, A34, A35, A36	

E3	**Micro-nano Photonics Laboratory**	Mihaela-Dana Cristea	9.00		modelling , simulation and CAD of micro and nano photonic structures	new materials for MOEMS, optoelectronics and photovoltaics (functional polymers, hybrid organic-inorganic nano-composites, transparent semiconducting oxides, graphene)	passive and active micro-nano-photonic structures for sensing applications (including plasmonics and and microoptics for optofluidics and biosensing)	optical and electrical characterization of materials and devices	2	CF31, CF32, F166*, F174*	A37, A38, A39, A40, A41, A42, A43, A44, A45, A48
E4	**Micromachined Structures, Microwave Circuits and Devices Laboratory (RF-MEMS)**	Alexandru Muller	13.00	1.00	Development of membrane supported microwave and millimeter wave circuits based on Si, GaAs and GaN micromachining, devoted to novel communication applications.	Acoustic devices (FBARs and SAWs) based on micromachining and nanoprocessing of WBG semiconductors, (GaN and AlN) for communication and sensor applications in the GHz frequency range	Microwave devices based on carbon nanotubes graphene and CRLH materials	UV photodetectors based on GaN/Si membranes	2	CF1, CF4, CF5, CF7, CF13, CF19, CF20, CF21, CF22, CF23, CF, 25, CF26, CF28	A54, A61, A66, A74, A79, A82, A89
E5	**Simulation, Modelling and Computer-Aided Design Laboratory**	Raluca Muller	9.50	2.00	Modelling, simulation (mechanical, thermal, electrical and electrostatic, piezoelectric), coupled field analysis and CAD of MEMS/NEMS	Development of Microfluidic structures and systems (simulation, design and manufacturing) for biomedical applications and micro-electronic applications	Development of new technologies for rapid prototyping at micro-nanoscale	Synthesis, characterization and electronic structure simulation of nanostructured materials for functional opto-electronic and spintronic applications	3	CF3, CF17, CF18, CF 27, F175*	A43, A100, A102, A103, A104, A105, A106, A108, A109, A150
E6	**Nano-scale structuring and characterization Laboratory**	Miron-Adrian Dinescu	4.00		Micro and nanoscale characterization through Scanning Probe Microscopy,	Nanoscale patterning through Electron Beam Lithography	Nano-indentation	Scanning Electron Microscopy, Nano-indentation		CF3, CF18, CF19, CF22, CF24, CF25, CF28, CF31, CF32	A20, A46, A77, A89, A90, A99, A110, A111, A117, A121
E7	**Reliability Laboratory**	Marius Bazu	4.00		Reliability building: design for reliability and testability, design for manufacture; reliability monitoring & screening of micro and nanostructures,	Reliability assessing: accelerated testing of micro and nanostructures; failure analysis & physics; data processing & reliability prediction	Standardization: certification; qualification and periodic tests; standards and other specifications	Biosensors: robust design, manufacturing and testing biosensors for pesticide detection in environment and food sample	0	CF2	A123, B2, B4, P15, P16, P17, RP2, RP3, RP23,CNISI144

E8	**Ambiental technologies Laboratory**	Ieana-Viorica Cernica	4.00	2.00	Developing new technologies in the area of microsistems technologies and nanosenzors:technological design,simulation and technological development up to the prototype level, MCM assembly techniques	New materials development: nanocompozites materials and ambiental and intelligent coatings and thin film nanosensors	Lighting systems development (on flexible surface included) and microphotodetectors for communications(included optical fiber) and environment monitoring	Technological services:technological assistance for flow design, control gates and technological compatibilities;dicing and spectrometric characterization(FTIR,UV-vis)	2	F168*, F172*	A124, P2, P3, CNISI82, CNISI152, CNISI119, CNISI77, CNISI75	
E9	**Molecular Nanotechnology Laboratory**	Radu-Cristian Popa	8.00	3.00	Experimental nano- and microtechnology of organic and inorganic materials	Advanced characterization of electronic materials	Modeling, simulation and analysis of quantum, microscopic and macroscopic phenomena in organic and inorganic materials and systems		2	CF10, CF14, CF24	A125, A126, A127, A128, A129, A130, A131	
E10	**Micro- and Nano-fluidics Laboratory**	Ciprian Iliescu	5.50		Creation of a lab-on-a-chip systems with extensive applicative potential	Modelling of the molecular transport in biological fluids and the physico-chemical modelling of the biological material	The development and characterization of the microfluidics which can deliver multiple solutions for magnetic nanoparticles based immunoassays	Modeling, simulation and analysis of nano- and micro-fluidic phenomena Newtonian and non-Newtonian flows	1	CF9, F170*, F171*	A132, A133, A134, A135, A136, A138, A139, A140, A141, A142	
SC1 (4)	**Laboratory for Mask manufacturing**	Gabriela Dragan		2.00								
SC2 (4)	**Laboratory for technological processing**	Nicolae Marin		6.00								
SC3 (4)	**Laboratory for mentenance of technological equipments**	Nicolae Marin		4.00								
SC4 (4)	**Support group - IT**			6.25								
		Total full time equivalent	**75.50**	**28.25**								

*ongoing till the end of December

(1) Full time equivalent. Researchers contributing to several teams will count the corresponding part-time fraction.
Example: A CS or IDT working in a single team = 1 (0,5 if working half time).
A CS or IDT working in two teams equally = 0,5 (0,25 if working half time) in each team.
A researcher that works half of his or her working time in the research unit under evaluation and half in another unit will contribute a total of 0,5 cumulated over all teams to which he/she contributes.

(2) Please indicate the corresponding labels from the lists of publications in the subsequent sheets.

(3) Projects and contracts other than "nucleu" programs. Labels according to "Project+collaborations" sheet.

(4) Other non-administrative technical sections.