ADVANCED NANOSCIENCE AND NANOTECHNOLOGY MASTER, YEAR 22/23

PROPOSALS FOR MASTER THESIS

No.	Institute/Department/Unit (group)	Website	Research line, topic	Supervisor, e-mail	Additional information
	Catalan Institute of Nanoscience and Nanotechnology (ICN2)				
1	Ultrafast Dynamics in Nanoscale Systems	www.ultrafastdynamics.com	Heat and charge dynamics in two-dimensional materials down to the monolayer	Klaas-Jan Tielrooij, klaas.tielrooij@icn2.cat	
2	Phononic and Photonic Nanostructures	https://www.icn2-p2n.eu/	Phonon-phonon scattering in silicon classical and topological waveguides	Clivia M Sotomayor Torres, clivia.sotomayor@icn2.cat	
3	Phononic and Photonic Nanostructures	https://www.icn2-p2n.eu/	Phonon-phonon scattering in TMDC topological edge waveguides and twisted layers	Clivia M Sotomayor Torres, clivia.sotomayor@icn2.cat	
4	Physics and Engineering of Nanodevices (PEN)	http://nanodevices.icn2.cat/	Spin transport and thermal effects in van der Waals systems	Juan F Sierra, juan.sierra@icn2.cat	
5	Physics and Engineering of Nanodevices (PEN)	http://nanodevices.icn2.cat/	Proximity effects in van der Waals heterostructures	Sergio O. Valenzuela, SOV@icrea.cat	
6	Atomic Manipulation and spectroscopy	http://ams.icn2.cat/	Atomically precise graphene nanoarchitectures for optoelectronic and sensing devices: synthesis of atomically precise graphene nanoarchitectures, characterization with STM and nanodevice fabrication	Jose Ramon Durán, joseramon.duran@icn2.cat Aitor Mugarza, aitor.mugarza@icn2.cat	
7	Thermal Propertis of Nanoscale materials	https://icn2.cat/en/thermal-properties-of-nanoscale-materials	Pyroelectric and electrocaloric measurements on ultrathin oxide membranes	Javier Rodríguez-Viejo, Tapas Bar	
8	Thermal Propertis of Nanoscale materials	https://icn2.cat/en/thermal-properties-of-nanoscale-materials	Heat capacity of 2D materials	Javier Rodríguez-Viejo, Aitor Lopeandia	
9	Thermal Propertis of Nanoscale materials	https://icn2.cat/en/thermal-properties-of-nanoscale-materials	Organic Solar Cells based on Ultra-Stable Glasses: Towards Stable and Efficient Devices	Javier Rodríguez-Viejo, Cristian Rodriguez	
10	Thermal Propertis of Nanoscale materials	https://icn2.cat/en/thermal-properties-of-na	Thermal transport in oxide membranes	Aitor Lopeandia	
11	Phononic and Photonic Nanostructures	https://www.icn2-p2n.eu/	Thermal transport in amorphous 2D materials	Marianna Sledzinska, marianna.sledzinska@icn2.cat Emigdio Chavez, emigdio.chavez@icn2.cat	
12	Nanostructured Materials for Photovoltaic Energy Group	https://icn2.cat/en/nanostructured-materials-for-photovoltaic-energy-group/monica-lira-cantu	Perovskite Solar Cells: synthesis of novel materials and complete device applications	Monica Lira-Cantu, monica.lira@icn2.cat	
13	Nanostructured Materials for Photovoltaic Energy Group	https://icn2.cat/en/nanostructured-materials-for-photovoltaic-energy-group/monica-lira-cantu	Flexible Perovskite Solar Cells with Ferroelectric Oxides	Monica Lira-Cantu, monica.lira@icn2.cat; Masoud Karimipour masoud.karimipour@icn2.cat	
14	Nanostructured Materials for Photovoltaic Energy Group	https://icn2.cat/en/nanostructured-materials-for-photovoltaic-energy-group/monica-lira-cantu	Pb-free halide perovskites for Perovskite Solar Cells: Double perovskites	Monica Lira-Cantu, monica.lira@icn2.cat; Sonia Raga, sonia.raga@icn2.cat	
15	Nanostructured Materials for Photovoltaic Energy Group	https://icn2.cat/en/nanostructured-materials-for-photovoltaic-energy-group/monica-lira-cantu	Perovskite Solar Cells with organic additives to enhance device stability	Monica Lira-Cantu, monica.lira@icn2.cat; Fatemeh Ansari, fatemeh.ansari@icn2.cat	
16	Nanobiosensors and Bioanalytical Applications	https://nanob2a.icn2.cat/	Development of nanophotonic sensors for infectious diseases diagnostics	Laura M. Lechuga, laura.lechuga@icn2.cat	
17	Nanobiosensors and Bioanalytical Applications	https://nanob2a.icn2.cat/	Design and evaluation of multiplexed nanophotonic interferometric systems	Laura M. Lechuga, laura.lechuga@icn2.cat	
18	Oxide Nanophysics	https://icn2.cat/en/oxide-nanophysics-grou	Avalanche dynamics on ferroelectric materials	Blai Casals, blai.casals@icn2.cat	
19	Supramolecular NanoChemistry & Materials	www.nanoup.org	Porous Metal-Organic Framework-based composites for pollutant removal and antimicrobial coa	Daniel Maspoch, daniel.maspoch@icn2.cat	
20	Nanostructured Functional Materials	www.nanosfun.com	Bioinspired materials for tissue regeneration (from artificial skin to neuro repair)	Salvio Suárez, salvio.suarez@icn2.cat	
21	Nanostructured Functional Materials		Multifunctional mussel-inspired coatings for environment remediation	Salvio Suárez, salvio.suarez@icn2.cat	
22	Nanostructured Functional Materials		Visible-light activated photochromic materials for smart windows applications	Claudio Roscini, claudio.roscini@icn2.cat	
23	Nanomedicine	www.nanomedicinelab.com	Design of graphene oxide nanosheets with biologically active molecules	Neus Lozano, neus.lozano@icn2.cat; Kostas Kostarelos, kostas.kostarelos@icn2.cat	
24	Nanobioelectronics and Biosensors Group (ICN2)	https://www.nanobiosensors.org/	Ink-jet printed nanosensors for heavy metals detection	Arben Merkoçi, arben.merkoci@icn2.cat; Giulio Rosati, giulio.rosati@icn2.cat	
25	Nanobioelectronics and Biosensors Group (ICN2)	https://www.nanobiosensors.org/	Development of new nanoinks printing protocols for sensing applications	Arben Merkoçi, arben.merkoci@icn2.cat; Giulio Rosati, giulio.rosati@icn2.cat	
26	Nanobioelectronics and Biosensors Group (ICN2)	https://www.nanobiosensors.org/	Graphene-based biosensors for diagnostics	Arben Merkoçi, arben.merkoci@icn2.cat;	
27	Novel Energy-Oriented Materials (ICN2)	http://neoenergy.cat/	Hybrid Nanomaterials development for energy storage applications	Rosa Maria González-Gil, rosamaria.gonzalez@icn2.cat; Pedro Gómez-Romero, pedro.gomez@icn2.cat	
28	Advanced Electronic Materials and devices	http://www.aemd.icn2.cat/	2D materials based neuro-electronics	Jose A. Garrido, joseantonio.garrido@icn2.cat; Elena del Corro, elena.delcorro@icn2.cat	
29	Theory and Simulation	https://icn2.cat/en/theory-and-simulation-g	Molecular modeling applied to metallic/liquid interfaces: evaluation of the quality of different models to describe water-metal interctions	Pablo Ordejón, pablo.ordejon@icn2.cat; Ernane de Freitas Martins, ernane.defreitas@icn2.cat	
30	Theory and Simulation	https://icn2.cat/en/theory-and-simulation-g	Electronic and structural properties of vdW heterostructures from a Density Functional Theory Approach	Pablo Ordejón, pablo.ordejon@icn2.cat; Roberta Farris, roberta.farris@icn2.cat	
31	Oxide Nanophysics Group & Nanomaterials Growth Unit	https://icn2.cat/en/oxide-nanophysics-grou	Epitaxial growth of ferroic thin-film solid solutions using advanced deposition methods (dual PLD or co-sputtering)	Gabriele De Luca, gabriele.deluca@icn2.cat; José Santiso, jose.santiso@icn2.cat	
32	Oxide Nanophysics Group & Nanomaterials Growth Unit	https://icn2.cat/en/oxide-nanophysics-grou	Development of novel epitaxial strain platform (with tunable cell parameters) for fluorite ferroics	Gabriele De Luca, gabriele.deluca@icn2.cat; José Santiso, jose.santiso@icn2.cat	
33	Oxide Nanophysics Group & Nanomaterials Growth Unit	https://icn2.cat/en/oxide-nanophysics-grou	Integration of HfO2-related epitaxial fluorite ferroics onto Si	Gabriele De Luca, gabriele.deluca@icn2.cat; José Santiso, jose.santiso@icn2.cat	

34	Colaboration between Nanomaterials Growth Unit at ICN2 & Nanoionics and Fuel	https://icn2.cat/en/nanomaterials-growth-u	Development of free-standing/flexible single crystal thin film oxide heterostructures based on fast ionic conducting materials for solid state ionic devices with close-to-room temperature operation	José Santiso, jose.santiso@icn2.cat; Albert Tarancón, atarancon@irec.cat	
	Microelectronics Institute (IMB-CNM-CSIC)				Funding
35	Grupo de Transductores Químicos (GTQ)	http://gtq.imb-cnm.csic.es	Sustainable manufacturing of electrochemical sensors based on metal /metal oxide nanoparticle carbon composite materials by printing technologies for environmental monitoring of chemical pollutants	César Fernández Sánchez, cesar.fernandez@csic.es (work carried out in collaboration with Dr. Martí Gich from ICMAB, mgich@icmab.es)	JAE-INTRO ICU 3000 € scholarship
36	Grupo de Microfabricación e integración de sensores y fuentes de energía (MESSI)	https://www.imb-cnm.csic.es/es/investigacion/grupos-de-investigacion/grupo-de-microfabricacion-e-integracion-de-sensores-y-fuentes	3w Volkein devices for assimetric materials. Determination of in plane thermal conductivity in assimetric nanostructures	Libertat Abad, Llibertat.Abad@imb-cnm.csic.es	JAE-INTRO ICU 3000 € scholarship
37	NEMS and Nanofabrication	http://nanonems.imb-cnm.csic.es/	Nanofabrication for semiconductor-based quantum computing	Francesc Pérez-Murano, francesc.perez@imb-cnm.csic.es	JAE-INTRO ICU 3000 € scholarship
38	NEMS and Nanofabrication	http://nanonems.imb-cnm.csic.es/	Nanoelectronic devices for biosensing	Joan Bausells, joan.bausells@imb-cnm.csic.es	
39	Micro NanoTools (MNTL)	http://mnt.imb-cnm.csic.es/	Development of plasmo-mechanical systems for sensing and catalysis	Borja Sepúlvada, borja.sepulveda@csic.es; Mar Álvarez, mar.alvarez@csic.es	JAE-INTRO ICU 3000 € scholarship
40	Micro NanoTools (MNTL)	http://mnt.imb-cnm.csic.es/	Development of suspended mechanochromic sensors	Mar Álvarez, mar.alvarez@csic.es; Jose A. Plaza, joseantonio.plaza@imb-cnm.csic.es	
41	Biomedical Applications Group (GAB)	http://gab.imb-cnm.csic.es/	Neural technologies based on graphene solution-gated field-effect transistors (gSGFETs)	anton.guimera@imb-cnm.csic.es; sergi.brosel@imb-cnm.csic.es; elisabet.prats@csic.es	
42	Biomedical Applications Group (GAB)	http://gab.imb-cnm.csic.es/	Development of fully printed tatoo electroencephalogram (EEG)	gemma.gabriel@csic.es	
43	Grupo de Transductores Químicos (GTQ)	http://gtq.imb-cnm.csic.es/en	Development and assessment of thin film organic electrochemical transistors (OECTs) for real-time biofluid monitoring.	Josep Maria Margarit, josepmaria.margarit@csic.es; Cecilia Jiménez, cecilia.jimenez@csic.es	Possibility to get a scholarship through a JAE-INTRO CSIC competitive call (3000 €/5 months with a possibility to get extra 3000 €/4 months)
44	Grupo de Microfabricación e integración de sensores y fuentes de energía (MESSI) - Línea de dispositivos termoeléctricos.	https://www.imb-cnm.csic.es/es/investigacion/grupos-de-investigacion/grupo-de-microfabricacion-e-integracion-de-sensores-y-fuentes	Heat exchanger packaging strategies for micro-thermoelectric generators. Assembly and characterization.	Marc Salleras i Joaquín Santander, marc.salleras@imb-cnm.csic.es i joaquin.santander@csic.es	
45	Grupo de Microfabricación e integración de sensores y fuentes de energía (MESSI) - Línea de dispositivos termoeléctricos.	https://www.imb-cnm.csic.es/es/investigacion/grupos-de-investigacion/grupo-de-microfabricacion-e-integracion-de-sensores-y-fuentes	Micro-thermoelectric generators based on block copolymer nanostructured thin-films. Fabrication and characterization.	Marta Fernández i Joaquín Santander, marta.fernandez@imb-cnm.csic.es i joaquin.santander@csic.es	
46	Grupo de Microfabricación e integración de sensores y fuentes de energía (MESSI) - Línea de dispositivos termoeléctricos.	https://www.imb-cnm.csic.es/es/investigacion/grupos-de-investigacion/grupo-de-microfabricacion-e-integracion-de-sensores-y-fuentes	Development of metal decorations by using thermal dewetting processes. Characterization and integration in TE applications.	Íñigo Martín i Libertad Abad, inigo.martin@csic.es i llibertat.abad@imb-cnm.csic.es	
	Materials Science Institute of Barcelona (ICMAB)				
47	Nanoparticle and Nanocomposites group (N&N)	https://nn.icmab.es/	Novel nanocomposites for wireless power transfer technologies	Pablo Guardia, pguardia@icmab.es	
48	Nanoparticle and Nanocomposites group (N&N)	https://nn.icmab.es/	Magnetic nanoparticles for biomedical applications	Pablo Guardia, pguardia@icmab.es	
49	SURFACES (FUNCTIONAL SURFACES AND INTERFACES)	https://surfaces.icmab.es/	Chemical recognition at the nanoscale through the development of new operational modes in Atomic Force Microscopy (AFM)	Albert Verdaguer, averdaguer@icmab.es	
50	Nanomol	https://nanomol.icmab.es/	4. Nanostructured Hydrogels for Cancer Immunotherapies Molecular Materials for Diagnosis:	Judith Guasch, jguasch@icmab.es	
51	Laser processing research	http://icmab.es/laserprocessing	Laser fabrication of nanocarbon-based electrodes for energy storage devices	Angel Perez del Pino, aperez@icmab.es	
52	Laser processing research	http://icmab.es/laserprocessing	Synthesis by laser techniques of hybrid organic/inorganic nanostructures for environmental applications	Enikö György, egyorgy@icmab.es	
53	Theory and simulation of materials / SoftMatter group	https://www.youtube.com/channel/UCkrTD	Modelling and Simulation of nanomaterials based on biomolecules for biomedical applications	Jordi Faraudo, jfaraudo@icmab.es	
54	Nanomol	https://nanomol.icmab.es/labs/organic-radi	Nanopartícules orgàniques radicalàries per obtenir contrast en imatge de ressonància magnètica	José Vidal, j.vidal@icmab.es	
55	Nanomol	https://nanomol.icmab.es/labs/organic-radi	Dendrímers amb propietats magnètiques i fluorescents per obtenir contrast en imatge de ressonància magnètica i de fluorescència	José Vidal, j.vidal@icmab.es	
56	NANOPTO-ENLIGHTMENT	https://nanopto.icmab.es/ - https://enlightn	Assemblies of Ge quantum dots fabricated by annealing and soft lithography and their transfer to flexible substrates.	M. Isabel Alonso, isabel@icmab.es; Agustín Mihi, amihi@icmab.es	
57	Molecular Materials for Electronic Devices (eMolMat)	https://molecularelectronics.icmab.es/	The "Molecular Materials for Electronic Devices" (e-MolMat) group is focused on the design and synthesis of new functional molecular materials for their application in electronic devices. This is an interdisciplinary group where researchers from different disciplines are working together. Our work ranges from fundamental studies to a more applied perspective aiming at developing proof-of-principle devices. Particularly, this project will be devoted to the development of (bio)-sensors.	Marta Mas Torrent, mmas@icmab.es	

58	Nanoparticles & Nanocomposites	https://nn.icmab.es/	Magnetic nanoparticles for beyind 5G devices	Marti Gich, mgich@icmab.es	
59	Nanoparticles & Nanocomposites	https://nn.icmab.es/	Growth and characterization of magnetic thin films for novel microwave assisted switching memories	Nico Dix, ndix@icmab.es; Martí Gich, mgich@icmab.es	
60	Laboratory of Multifunctional Oxides and Complex Structures MULFOX	https://mulfox.icmab.es/	Synthesis and characterization of two-dimensional materials for quantum technologies	Gyanendra Singh, gsingh@icmab.es; Gervasi Herranz, gherranz@icmab.cat	
61	Laboratory of Multifunctional Oxides and Complex Structures MULFOX	https://mulfox.icmab.es/	Growth and characterization of ferroelectric HfO2 thin films for memory devices	Ignasi Fina, ifina@icmab.es; Florencio Sánchez, fsanchez@icmab.es	
62	NANOMOL	https://nanomol.icmab.es/	Molecular conductors for opto-electronic sensors in the development of an artificial electronic skin (eSkinSense)	Raphael Pfattner, rpfattner@icmab.es	
63	Functional Nanomaterials and Surfaces (FunNanoSurf)	https://funnanosurf.icmab.es/	Curcumin-based active surfaces towards the preparation of (bio)sensors	Dra. Arántzazu González-Campo, agonzalez@icmab.es	
64	Functional Nanomaterials and Surfaces (FunNanoSurf)	https://funnanosurf.icmab.es/	Synthesis of curcuminoid-based polymers for sensoring and electronic applications	Dra. Núria Aliaga-Alcalde, naliaga@icmab.es	
65	Functional Nanomaterials and Surfaces (FunNanoSurf)	https://funnanosurf.icmab.es/	Synthesis of supramolecular responsive polymers based on curcuminoids for metal sensors	Dra. Arántzazu González-Campo, agonzalez@icmab.es	
66	Functional Nanomaterials and Surfaces (FunNanoSurf)	https://funnanosurf.icmab.es/	Synthesis of molecular-based materials and their testing as components in electronic devices	Dra. Núria Aliaga-Alcalde, naliaga@icmab.es	
67	Functional Nanomaterials and Surface (FunNanoSurf) and Supercritical Fluids and Functional Materials (SFFM)		Preparation of Biocompatible Metal-Organic Frameworks (Bio-MOFs) and their immobilization on surfaces using ecoficient technologies	Dra. Arántzazu González-Campo, agonzalez@icmab.es; Dra. Ana M. López-Periago, amlopez@icmab.es	
68	Supercritical Fluids and Functional Materials (SFFM)	https://ssc.icmab.es/supercritical-fluids-and	Preparation of graphene oxide/polymeric aerogel nanocomposites using scO2 technology	Ana Lopez-Periago, amlopez@icmab.es; C. Domingo, conchi@icmab.es	
69	SUMAN	https://suman.icmab.es	1) Functional Oxides for Neuromorphic Computing	Anna palau, palau@icmab.es	
70	SUMAN	https://suman.icmab.es	2) Nano-Engineered High-Temperature Superconductors for Functional Quantum Devices	Anna palau, palau@icmab.es	
71	SUMAN	https://suman.icmab.es	3)Synthesis of oxid nanoparticles for the production of functional ceramic materials.	Ramón Yáñez <ramon.yanez@uab.cat>, Susagna Ricart <ricart@icmab.es>	
72	Solid state chemistry /Elcterochemistry and electroactive materials	https://ssc.icmab.es/electrochemistry-and-e	TiO2 nanotubes through wireless bipolar oxidation	Nieves Casañ, nieves@icmab.es	
73	Solid State Chemistry	https://ssc.icmab.es/nanointerfaces/	Microbatteries for operando microscopy	Dino Tonti, dino@icmab.es	
74	Sustainable Molecular Systems	https://twitter.com/DAmabilino?ref_src=tws	Molecular motion along nanoscale supramolecular paths	David Amabilino, amabilino@icmab.es	
75	Sustainable Molecular Systems	https://twitter.com/DAmabilino?ref_src=tws	Nanostructured Chiral Dyes for Efficient Transport through Spin Selectivity	David Amabilino, amabilino@icmab.es	
76	Nanoparticle and Nanocomposites group (N&N)	https://nn.icmab.es/	Cellulose and it's composites	Anna laromaine, alaromaine@icmab.es	
77	Nanomol	https://www.icmab.es/nanomol	Nanostructured Molecular materials for treatment & prevention of infections.	Nora Ventosa i Imma Ratera, ventosa@icmab.es i iratera@icmab.es	
78	Nanomol	https://www.icmab.es/nanomol	Hierarchical Nanoarchitectonic Materials for Regenerative Medicine	Imma Ratera, iratera@icmab.es	
79	Nanomol	https://www.icmab.es/nanomol	Fluorescent nanovesicles and organic nanoparticles for sensing and bioimaging	Nora Ventosa i Imma Ratera, ventosa@icmab.es i iratera@icmab.es	
	Biochemistry and Molecular Biology, UAB				
80	Grupo de Ingeniería de Proteínas y Nanomedicina	ibb.uab.cat/wp-content/themes/viral/modu	Design and validation of nanocarriers and nanomaterials for biomedical applications related to brain disease treatment and diagnosis.	julia.lorenzo@uab.cat	
81	Grupo de Ingeniería de Proteínas y Nanomedicina		Nanotechnological development of new drug delivery systems based on engineered enzymes for their use in enzyme replacement therapies.	julia.lorenzo@uab.cat	
82	Systems Biology of Infection Lab	https://sites.google.com/site/marctorrentbu	Use of liposome-encapsulated peptides as a new strategy to treat bacterial infections	marc.torrent@uab.cat	
83	Lipid-based nanosized drug delivery systems	https://www.uab.cat/web/unitats-departam	Metallosurfactant based CO releasing systems for biomedical applications	ramon.barnadas@uab.cat	
84	Human Rnases involved in Host Defense	https://grupsderecerca.uab.cat/hrnases/en	Design of antimicrobial proteins to target the emergence of bacterial resistance	ester.boix@uab.cat	
85	Protein Folding and Conformational Diseases	https://ibb.uab.cat/wp-content/themes/	Bioengineering Nanomaterials to Trap and Neutralize SARS-CoV-2	salvador.ventura@uab.cat	
86	Protein Folding and Conformational Diseases	https://ibb.uab.cat/wp-content/themes/	Bioengineering Nanomaterials to Develop Novel Immunotherapies	salvador.ventura@uab.cat	
	Chemical, biological and environmental engineering, UAB				
87	Chemical engineering department UAB - GICOM	www.gicom.cat	Nanomaterials synthesis for CO2 catalysis to methanol	Javier Moral, antoniojavier.moral@uab.cat	
88	Chemical engineering department UAB - GICOM	www.gicom.cat	Interaction between nanomaterials and biosurfactants	Javier Moral, antoniojavier.moral@uab.cat; Anna Carrasco, anna.carrasco@uab.cat	
	Physics, UAB				
89	Group of Smart Nanoengineered Materials, Nanomechanics and Nanomagnetism	https://jsort-icrea.uab.cat/	Towards reliable and efficient voltage control of magnetism via magneto-ionics for neuromorphic computing applications	Jordi Sort, sort.jordi@gmail.com; Zheng Ma, mazheng2016@gmail.com; Enric Menéndez, enric.menendez@uab.cat	There will be the possibility to perform a PhD Thesis on this topic under the ERC Advanced Grant project REMINDS (Voltage-Reconfigurable Magnetic Invisibility: A New Concept for Data Security Technologies)
90	Group of Smart Nanoengineered Materials, Nanomechanics and Nanomagnetism	https://jsort-icrea.uab.cat/	Metallic Fe-Mn nanofoams infilitrated with biodegradable polymer for temporary implant applica	Aleksandra Bartkowska, aleksandra.bartkowska@uab.cat; Eva Pellicer, eva.pellicer@uab.cat	
91	Group of thermal properties of nanoscale materials, GTNaM	https://grupsderecerca.uab.cat/gnam/es	Organic thin film glasses for solar cell applications	Cristian Rodríguez i Marta González, cristian.rodriguez@uab.cat i marta.gonzalez@uab.cat	
92	Group of thermal properties of nanoscale materials, GTNaM		Thermal transport and thermoelectricity in low dimensional materials	Aitor Lopeandia i Javier Rodríguez, aitor.lopeandia@uab.cat i javier.rodriguez@uab.cat	

93	Superconductivity Group	https://grupsderecerca.uab.cat/supercondu	Magnetic metamaterials	Àlvar Sánchez, alvar.sanchez@uab.cat	
94	Superconductivity Group	https://grupsderecerca.uab.cat/supercondu	Superconducting materials for sensors and quantum technologies	Àlvar Sánchez, alvar.sanchez@uab.cat	
95	Unitat Electromagnetisme (Sky-Bit project)	https://grupsderecerca.uab.cat/supercondu	Magnetoresistance with spatially varied polarization	Carles Navau, carles.navau@uab.cat	
96	Unitat Electromagnetisme (Sky-Bit project)	https://grupsderecerca.uab.cat/supercondu	Antiferromagnetic skyrmions	Carles Navau, carles.navau@uab.cat	
97	Group of Magnetic Nanomaterials, Department of Condensed Matter Physics & In	https://magneticnanomaterialsub.wordpres	Development of phononic memories capable of allowing or inhibiting phonon transport by applying electric fields	Eric Langenberg, eric.langenberg@ub.edu	The TFM will be carried out at the Department of Condensed Matter Physics of University of Barcelona. Upon finishing, there will be the possibility to perform a PhD Thesis on this topic.
	Cellular Biology, Physiology and Immunology, UAB				
98	Cell Biology and Cell-Material Interactions (CBCMI)	Departament de Biologia Cel·lular, de Fisiolo	The in vitro biocompatibility of new materials and nanodevices for vascular and orthopaedic app	Andreu Blanquer, andreu.blanquer@uab.cat; Carme Nogués, carme.nogues@uab.cat	
99	Cell Biology and Cell-Material Interactions (CBCMI)	Departament de Biologia Cel·lular, de Fisiolo	The effect of piezoelectric and electroactive nanomaterials on skin cells behaviour.	Andreu Blanquer, andreu.blanquer@uab.cat; Carme Nogués, carme.nogues@uab.cat	
	Chemistry, UAB				
100	Computational BioNanoCat	https://compbionanocat.wordpress.com/)	Development of BCN-M, a computational tool for the generation of Wulff-like nanoparticle models.	Xavier Solans Monfort, xavier.solans@uab.cat	
101	Computational BioNanoCat		Modeling of electrocatalysis for sustainable energy conversion and storage using nanocatalysts	Xavier Solans Monfort, xavier.solans@uab.cat	
102	Computational BioNanoCat		Development of force fields for metal oxide materials through machine learning techniques.	Xavier Solans Monfort, xavier.solans@uab.cat	
103	SelOxCat	https://seloxcat.com/	Surface-functionalized nanoparticles for light driven reactions.	Xavier Sala, xavier.sala@uab.cat, Laia Francàs Forcada, laia.francas@uab.cat	
104	SelOxCat	https://seloxcat.com/	Nanomaterials for the production of liquid renewable fuels from CO2 .	Roger Bofill, roger.bofill@uab.cat, Xavier Sala, xavier.sala@uab.cat	
105	SelOxCat	https://seloxcat.com/	Emerging 2D inorganic nanomaterials for Green Energy conversion.	Jordi García-Antón, jordi.garciaanton@uab.es, José Muñoz, josemaria.munoz88@gmail.com	
106	SelOxCat	https://seloxcat.com/	Preparation and testing of nanocatalysts for the production of solar fuels.	Laia Francàs, laia.francas@uab.cat, Eliana Sousa, souseliana@gmail.com	
107	Integrated Analytical Microsystems. Microfluidics for (Bio)Chemical Sensing. Group of Sensors and Biosensors	https://gsbanalyticalmicrosystems.wordpres	Microreactors assisted synthesis of Carbon Dots as luminiscent reagents for analytical chemistry. Tasks: development of microreactors and micro Total Analysis Systems (μTAS) by CAD design and microstructuring using polymer and ceramics technology; synthesis and physical/chemical characterization of nanoparticles; environmental analytical application to heavy metals detection of poluted waters (using a sprectrofluorimeter and μTAS).	Mar Puyol Bosch, mariadelmar.puyol@uab.cat	
	Electronic Engineering, UAB				
108	Electronic Circuits and Systems Group (ECAS)	https://grupsderecerca.uab.cat/ECAS/en, https://portalrecerca.uab.cat/en/organisations/electronic-circuits-and-systems-group-ecas-grup-de-circuits-i-sis	Micro and Nanoelectromechanical Systems (M/NEMS). Topics: Resonators, Non-linearities, Synchronization, Sensors Ultrasound transducers based on piezoelectric materials (PMUTs). Topics: fingerprint, ultrasound image (medical image), airborne sensing	Núria Barniol, nuria.barniol@uab.cat; Arantxa Uranga, arantxa.uranga@uab.cat; Francesc Torres, francesc.torres@uab.cat	
109	REDEC: Reliability of Electron Device and Circuits	https://grupsderecerca.uab.cat/redec/es/biblio/author/180	Nanoscale characterization with AFM of materials for nanoelectronic applications. Characterization of CMOS nanoelectronic devices for security applications. Characterization of emerging nanoelectronic devices: graphene based devices, organic devices, devices for neuromorphic applications. Modeling.	Montserrat Nafría, montse.nafria@uab.cat	
110	NANOCOMP		Simulation and modelling of nanoelectronic devices at THz frequencies	Xavier Cartoixà, xavier.cartoixa@uab.cat; Xavier Oriols, xavier.oriols@uab.cat	
	Geology, UAB				
	Biotechnology and Biomedicine Institute (IBB), UAB				