

CURRICULUM INVESTIGADOR DEL GRUPO EN LOS ÚLTIMOS 5 AÑOS

El BIONANOSURF es un grupo multidisciplinar compuesto por 46 miembros con amplia formación en física, bioquímica, química, biotecnología y otras áreas relevantes. La naturaleza multidisciplinar del grupo facilita la investigación y el desarrollo en numerosas áreas, incluyendo biosensores, terapia génica, magnetismo, fotoquímica, química de superficies y óxidos metálicos moleculares, entre otros.

A continuación, describimos un resumen de los méritos más importantes del grupo.

PROYECTOS PÚBLICOS LIDERADOS POR MIEMBROS DEL GRUPO (Últimos 5 años)

- CIBER-BBN (CB16/01/00263). Instituto de Salud Carlos III. CSIC. IP: Jesús Martínez de la Fuente. 2023. 86.745€.
- Activación remota de canales Piezo1 con nanopartículas magnéticas. (GALACTIC). Proyecto I+D MICINN. IP: María Moros y Raluca Fratila. 2022-2025. 168.190€.
- Tuning the force for remote magnetomechanical gating of Piezo1 channels (MAGPIEZ). MSCA. IP: María Moros. 2022-2024. 181.152,96€.
- CIBER-BBN (CB16/01/00263). Instituto de Salud Carlos III. CSIC. IP: Jesús Martínez de la Fuente. 2022. 91.618,27€.
- EUREKArt: Communicating European Science Research Knowledge through Arts, Coordinador ESCIENCIA, IP UNIZAR. Lucía Gutiérrez (2021-2023) 222.155 € total. UNIZAR: 43.958€.
- Activación de Enzimas mediante Calentamiento Local Inducido por Nanopartículas para Aplicaciones Biomédicas (ACTENZYMES). Proyectos de I+D+I Retos Investigación MICINN.CSIC. IP: Jesús Martínez de la Fuente. 2021-2024. 266.200€
- Dispositivos "tumor en Chip" microestructurados para la evaluación de nanoterapias enzimáticas para cancer colorrectal. Proyectos I+D+I Líneas Prioritarias y de carácter multidisciplinar. DGA. IP: Carlos Sánchez Somolinos. 2021-2023. 99.935,00 €
- Point-of-care tests for the rapid detection of SARS-CoV-2. Proyectos intramurales especiales CSIC. IP: César Fernández, Pilar Marco, Jesús Martínez de la Fuente (INMA). 01/04/2020-31/08/2022. 181.500 €
- A gold nanoparticle-based biosensor for user-friendly prostate cancer diagnosis in urine. Norwegian Cancer Society. IP: Alicia Llorente (Coordinadora del consorcio), Jesús Martínez de la Fuente (INMA). 2021 - 2024. 5.389.000 NOK (CSIC: 15.000 €)
- Diagnosis and treatment of Sars-Cov-2 by triplex formation. Fundació la Marató de TV3. IP: Ramón Eritja (Coordinador del consorcio), Valeria Grazú (INMA). 2021 - 2023. 100.000 €.
- NanoCare: Red de nanomedicina para el diagnóstico y tratamiento de enfermedades de alto impacto social: cancer, aterosclerosis y enfermedades infecciosas. Coordinador: Fernando Herranz, IP UNIZAR L. Gutiérrez (2019-2022). Total 15.000€.

- Aumento de la regeneración tisular mediante estimulación magnetotérmica. Ayudas Ramón y Cajal 2019. CSIC. IP: María Moros Caballero. 2021-2024. 150.000 €
- NanoRural - Divulgación científica en la España vacía. Fundación General CSIC – Cuenta la Ciencia - 2020. IP: Andrés Seral Ascaso. 2021. 2.000 €
- CIBER-BBN (CB16/01/00263). Instituto de Salud Carlos III. CSIC. IP: Jesús Martínez de la Fuente. 2021. 86.020€
- Soft and Tangible Organic Responsive Materials progressing roBOTic functionS (STORM-BOTS). H2020-MSCA-ITN-2020. IP: Carlos Sánchez Somolinos. 2021-2025. 501.809,76 €
- PHarmaceutical Open innovation test bed for Enabling Nano-pharmaceutical Innovative products (PHOENIX); EU H2020-NMBP-TO-IND-2018-2020. PI (CSIC): Jesús Martínez de la Fuente. 2021-2025. 406.219 €
- POMlymers: Combatting antimicrobial resistance with hybrid antimicrobial materials. CSIC. IP: Scott Mitchell. 2020-2021. 21.375 €
- Aproximaciones innovadoras a antimicrobianos de amplio espectro (POMlímeros). MICINN. Proyectos de I+D+i. IP: Scott Mitchell y Rafael Martín Rapún. 2020-2022. 72.600 €
- Remote control of cellular signalling triggered by magnetic switching (SIROCCO). Starting grant ERC-2019-STG. IP: María Moros Caballero. 2020-2025. 1.798.454 €
- CIBER-BBN (CB16/01/00263). Instituto de Salud Carlos III. CSIC. IP: Jesús Martínez de la Fuente. 2020. 71.123 €
- Ayudas para grupos consolidados. DGA. 2020-2022. IP: Jesús Martínez de la Fuente. 30.360€.
- 4D-ON CHIP: Impresión 4D de plataformas biomiméticas "Órgano en chip". DGA. CSIC. IP: Carlos Sánchez Somolinos. 2018-2020. 85.316,18 €
- 2D Materials/Polyoxometalate Hybrids for Heritage Conservation (HERICARE). H2020-MSCA-IF-2018. IP: Jesús Martínez de la Fuente. 2019-2021. 160.932,48 €
- Targeted intracellular delivery of antitubercular agents by functionalized nanocapsules (TB-NANO). H2020-MSCA-IF-2018. IP: Jesús Martínez de la Fuente. 2019-2021. 172.932,48 €
- Peptide-functionalized POMs as biofilm disruption agents: searching for synergy in bactericidal materials (PEPIPOM). H2020-MSCA-IF-2018. IP: Scott Mitchell. 2019-2021. 172.932,48 €
- A testing bed for the development of high-risk medical devices (TB-MED). H2020-NMBP-TO-IND-2018-2020. IP: Raluca Fratila. 2019-2023. 8.480.543,89 € (UZ: 502.335 €)
- Redesigning biocatalysis: Thermal-tuning of one-pot multienzymatic cascades by nanoactuation (HOTZYMES). H2020-FETOPEN-2018-2019-2020-01. IP: Valeria Grazú. 2019-2023. 2.992.388,75 € (CSIC: 810.532,50 €).
- Advanced and versatile printing platform for the next generation of active microfluidic devices (PRIME). FETOPEN-2018-2019-2020-01. CSIC. IP: Carlos Sánchez Somolinos. 2019-2023. 2.820.991,25 €. CSIC: 893.096,25 €
- Nanopartículas magnéticas para aumentar la fluidez de la membrana celular con hipertermia localizada (MACBETH). MICINN. IP: Raluca Fratila y Lucía Gutiérrez. 2019-2022. 72.600 €
- CIBER-BBN (CB16/01/00263). Instituto de Salud Carlos III. CSIC. IP: Jesús Martínez de la Fuente. 2019. 59.718 €

- Desarrollo de nuevos Biosensores Ultrasensibles para la Detección de Gluten (BUDGiE). DGA. CSIC. IP: María Moros Caballero. 2018-2020. 60.363 €
- Cell models to minimize animal experiments in the treatment of cancer by magnetic hyperthermia. UZ. IP: Lucía Gutiérrez y Raluca Fratila. 2018. 1.000 €
- CIBER-BBN (CB16/01/00263). Instituto de Salud Carlos III. CSIC. IP: Jesús Martínez de la Fuente. 2018. 66.338 €
- Ayudas para grupos consolidados. DGA. 2017-2019. IP: Jesús Martínez de la Fuente. 47.531 €
- Risk Governance of Nanotechnology (RISKGONE). NMBP-13-2018. IP CSIC: Jesús Martínez de la Fuente. 2019-2023. 4.999.980 € (CSIC: 159.545 €)
- Biocatálisis termo-activada por nano-actuación (HEATOOLS). MICINN CSIC. IP: Jesús Martínez de la Fuente. 2018-2020. 256.036 €
- Exploitation of extracellular vesicles for precision diagnostics of prostate cancer (PROSCANEXO). TRANSCAN II-EU. CSIC, EMC, OUH, BMC, UT. IP: Jesús Martínez de la Fuente. 2018-2021. 182.258 €
- Localized MAGnetIC hyperthermia CELL-based GENE therapy for immune modulation (MAGICCELLGENE). ERANET 2016. CSIC, UNIZAR, Associação para a Inovação e Desenvolvimento da FCT. IP: Valeria Grazú. 2017-2020. 122.000 €.
- A Photothermal lateral flow test for visual point of care detection (HOTFLOW). ERC-2016-PoC. H2020. CSIC. IP: Jesús Martínez de la Fuente. 2017-2018. 149.293 €.
- Eliminación de la corona de proteínas de nanopartículas por inversión de carga de la superficie (REVERSED). MINECO. IP: Rafael Martín Rapún. 2016-2018. 40.293 €.
- Evaluación de la efectividad y especificidad de nanopartículas multifuncionales en terapias antitumorales utilizando un modelo de cáncer de ovario en ratones. CSIC. IP: Jesús Martínez de la Fuente. 2016-2019. 77.880€.
- Antimicrobial nanomaterials for the preservation of cultural heritage (PEPA). Fundación General CSIC. Proyecto ComFuturo. IP: Scott G. Mitchell. 2015-2018. 135.000 €.
- Desarrollo de nuevas terapias y nanobiosensores para el diagnóstico y tratamiento de colitis ulcerosa y cáncer colorectal – NanoGram (SAF2014-54763-C2-2-R). MINECO. IP: Jesús Martínez de la Fuente y Eva Gálvez. 2015-2018. 220.000 €.
- Nanotherapeutics for antibiotic resistant emerging bacterial pathogens- NAREB. FP7-NMP. Universidad de Zaragoza, Instituto Pasteur, CEA Un. Utrech, Procarta, NMI, FZB, BioAster, NIBSC, GSK, Coris, Nanoimmunotech, SINTEF, Inserm, Kuecept. IP: José Antonio Aínsa y Jesús Martínez de la Fuente. 2014-2018. 13.071.859,20 € (UNIZAR 866.232 €).

PROYECTOS PÚBLICOS EN LOS QUE PARTICIPAN MIEMBROS DEL GRUPO (últimos 5 años)

- Biocatalytic membranes for micro/nano plastic degradation within waste water effluents (BMRex). HORIZON-EIC-2022-PATHFINDEROPEN-01. IP: Jonas Gorauskis. INMA: Scott Mitchell, equipo de investigación. 2023-2026. Cuantía total: 3.213.793,50€. Cuantía CSIC: 678.505,00€.

- Eco-design of nanocellulose-based solutions for cultural heritage conservation: materials development, validation and life cycle assessment (ENCLOSURE). Proyectos de Transición Ecológica y Transición Digital. 12/2022-11/2024. IP: Maite Maguregui Hernando. INMA: Scott Mitchell, equipo de investigación. Cuantía total: 276.000€.
- Biomaterial Risk Management (BIORIMA). NMBP-12-2017. EU. 2017-2021. IOM, AU, ERS, ENAS, ISTE CNR, CSIC, UNIMAN, WWU, KI, UNITO, EMPA, URTV, HWU, UPDiderot, TCD, NAPIER, WU, INIA, UAVR, Fraunhofer, NTUA, UNIVE, INERIS, LEEDS, WG, BNN, ITENE, IRES, CIC, NAV, COL, FCF, IUTA, RCSI, TECL, CEA, JRF, GD, TUS, HKUST, ZJU. IP: IOM. INMA: Jesús Martínez de la Fuente, equipo de investigación. Cuantía: 7.999.981,25 € (CSIC: 30.000 €).
- Nanocristales magnéticos mono-núcleo y multi-núcleo para aplicaciones biomédicas. Ministerio de Economía y Competitividad (2015- 2018). IP: Sabino Veintemillas (ICMM/CSIC). INMA: Lucía Gutiérrez Marruedo, equipo de investigación. Cuantía: 150.000 €.
- Nanoparticle-based, brain-exclusive, delivery of p38 MAPK inhibitors for the treatment of Alzheimer's disease. Fundación BBVA. 2016-2018. IP: Carlos Dotti. INMA: Jesús Martínez de la Fuente, equipo de investigación. Cuantía: 150.000 €.

CONTRATOS CON EMPRESAS (últimos 5 años)

- Contrato de I+D entre CSIC y Oniria Therapeutics S.L. 2023. IP: Jesús Martínez de la Fuente. 41.603€.
- Preparación de bioconjugados para un sistema thermo-LFA para la detección de SARS-CoV2. Nanoimmunotech. S.L. 2022-2023. IP: Jesús Martínez de la Fuente. 13.038,6€.
- Further development of the nano-patterned water as a platform for drug delivery to the eye-NCap4eye.3 Recordati Rare Diseases SARL. 2022-2023. IP: Jesús Martínez de la Fuente y Rafael Martín Rapún. 39.927,55€.
- Desarrollo de un sistema Thermo-LFA para la detección de bacterias en carne. AGENCIA ESTATAL CSIC, M.P., Fundación BOSCH I GIMPERA, IUL, S.A., OPERON, S.A., NANOIMMUNOTECH, S.L. 2022. IP CSIC: Jesús Martínez de la Fuente. 64.716,85 €
- Desarrollo de formulaciones innovadoras basadas en biomateriales Epimiméticos. NATUREMIMETIX, S.L. IP: Scott Mitchell. 2021-2023. 365.014,65 €.
- Development of carriers for the delivery of cysteamine to the eye-NCap4Eye2. Recordati Rare Diseases SARL. 2021-2022. IP: Jesús Martínez de la Fuente y Rafael Martín Rapún. 80.012,26 €.
- Development of carriers for the delivery of cysteamine to the eye-NCap4Eye. Orphan Europe S.A.R.L. 2019-2020. IP: Jesús Martínez de la Fuente y Rafael Martín Rapún. 87.363,90 €.
- Impresión inkjet de materiales funcionales BSH Electrodomésticos España, S.A. CSIC. 2016-2019. IP: Carlos Sánchez Somolinos. 205.700 €.
- Apoyo tecnológico "Análisis y prototipado de inkjet luminiscente aplicado a lavadoras". BSH Electrodomésticos España, S.A. CSIC. 2018. IP: Carlos Sánchez Somolinos. 8.470 €.

PUBLICACIONES DEL PERSONAL ACTUAL DE GRUPO (ÚLTIMOS 5 AÑOS)

- M. Javadzadeh, J. del Barrio, **C. Sánchez-Somolinos**. *Melt electrowriting of liquid crystal elastomer scaffolds with programmed mechanical response*. *Advanced materials*. 2023. In press.
- M. Bhandari, **H. Soria-Carrera**, J. Wohlmann, N. J. K. Dal, **J. M. de la Fuente**, **R. Martín-Rapún**, G. Griffiths, F. Fenaroli. *Subcellular localization and therapeutic efficacy of polymeric micellar nanoparticles encapsulating bedaquiline for tuberculosis treatment in zebrafish*. *Biomaterials Science*, 2023. In press.
- **R. Pamplona**, S. González-Lana, P. Romero, I. Ochoa, **R. Martín-Rapún**, **C. Sánchez-Somolinos**. *Tuning of mechanical properties in photopolymerizable gelatin-based hydrogels for in vitro cell culture systems*. *ACS Applied Polymer Materials*, 5, 2, 2023, 1487-1498.
- M. Pallarès, I. Pi-Jauma, I. C. Fortunato, **V. Grazú**, M. Gómez-González, P. Roca-Cusachs, **J. M. de la Fuente**, R. Alert, R. Sunyer, J. Casademunt, X. Trepat. *Stiffness-dependent active wetting enables optimal collective cell durotaxis*. *Nature Physics*, 19, 2, 2023, 279-289.
- M. Aureliano, **S.G. Mitchell**, P. Yin. Editorial: *Emerging polyoxometalates with biological, biomedical, and health applications*. *Frontiers in Chemistry* 10, 977317, 2022.
- S. J. D. Luggier, **L. Ceamanos**, D. J. Mulder, **C. Sánchez-Somolinos**, A. P. H. J. Schenning. 4D Printing of supramolecular liquid crystal elastomer actuators fueled by light. *Advanced Materials Technologies*. 2022. In press.
- I. Franco Castillo, A. Misra, S. Laratte, M. Gommeaux, R. Perarnau, N. Vaillant-Gaveau, C. Pierlot, C. Streb, **S.G. Mitchell**, S. Eyssautier-Chuine. *New protective coatings against lampenflora growing in the Pommery Champagne cellar*. *International Biodeterioration and Biodegradation*, 173, 2022, 105459.
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- **H. Soria Carrera**, **E. Atrián-Blasco**, **R. Martín-Rapún**, **S. G. Mitchell**. *Polyoxometalate-peptide hybrid materials: from structure-property relationships to applications*. *Chemical Science*, 14 (1) 2022 10-28.
- G. Onorato, F. Faardella, A. Lewinska, F. Gobbo, G. Tommasini, M. Wnuk, A. Tino, **M. Moros**, M. R., Antognazza, C. Tortiglione. *Optical control of tissue regeneration through photostimulation of organic semiconducting nanoparticles*. *Advanced healthcare materials*, 11, 19, 2022, 2200366.
- M. Porru, M. del Puerto Morales, A. Gallo-Cordova, A. Espinosa, **M. Moros**, F. Brero, M. Mariani, A. Lascialfari, J. García Ovejero. *Tailoring the magnetic and structural properties of Manganese/Zinc doped iron oxide nanoparticles through microwaves-assisted polyol synthesis*. *Nanomaterials*, 12, 19, 2022, 3304.
- E. Boccia, M. Alfieri, R. Belvedere, V. Santoro, M. Colella, P. del Gaudio, **M. Moros**, F. Dal Piaz, A. Petrella, A. Leone, A. Ambrosone. *Plan hairy roots for the production of extracellular vesicles with antitumor bioactivity*. *Communications Biology*, 5, 1, 2022, 848.

- **I. Armenia, C. Cuestas Ayllón, B. Torres Herrero, F. Bussolari, G. Alfranca, V. Grazú, J. Martínez de la Fuente.** *Photonic and magnetic materials for on-demand local drug delivery.* *Advanced drug delivery reviews*, 191, 2022, 114584.
- A. Aviñó, **C. Cuestas-Ayllón**, M. Gutiérrez-Capitán, L. Vilaplana, **V. Grazú**, V. Noé, E. Balada, A. Baldi, A. Félix, E. Aubets, S. Valiuska, A. Domínguez, R. Gargallo, R. Eritja, M. P. Marco, C. Fernández-Sánchez, **J. M. de la Fuente**, C. Ciudad. *Detection of SARS-CoV-2 Virus by triplex enhanced nucleic acid detection assay (TENADA).* *International Journal of Molecular Sciences*, 23, 23, 2022, 15258.
- **Javier Idiago-López, Eduardo Moreno-Antolín**, Maite Eceiza, Jesús M. Aizpurua, **Valeria Grazú, Jesús M. de la Fuente, Raluca M. Fratila** - “*From Bench to Cell: A Roadmap for Assessing the Bioorthogonal “Click” Reactivity of Magnetic Nanoparticles for Cell Surface Engineering*”, *Bioconjugate Chem.*, 2022, 33, 1620–1633. Portada de la revista (septiembre 2022).
- Y. Han, Y. Yang, Q. Sun, B. Li, C. Yue, Y. Liu, **J. M. de la Fuente.** *Dual-targeted lung cancer therapy via inhalation delivery of UCNP-siRNA-AS1411 nanocages.* *Cancer Biology and Medicine*, 19,7, 2022, 1047-1060.
- **Yilian Fernández-Afonso, Laura Asín**, Lilianne Beola, **Raluca M. Fratila, Lucía Gutiérrez** - *Influence of magnetic nanoparticle degradation in the frame of magnetic hyperthermia and photothermal treatments*, *ACS Appl. Nano Mater.*, 2022, 5, 16220-16230.
- A.G. Enderle, **I. Franco-Castillo, E. Atrián-Blasco, R. Martín Rapún**, L. Lizarraga. M.J. Culzoni, M. Bollini, **J. M. de la Fuente**, F. Silva, C. Streb, **S.G. Mitchell.** *Hybrid antimicrobial films containing a polyoxometalate-ionic liquid.* *ACS Applied Polymer Materials*. 4, 6, 2022, 4144 – 4153.
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- W. Mekseriwattana, P. Guardia, **B. Torres Herrero, J. M. de la Fuente**, C. Kuhakarn, A. Roig, K.P. Katewongsa. *Riboflavin-citrate conjugate multicore SPIONs with enhanced magnetic responses and cellular uptake in breast cancer cells.* *Nanoscale Advances*. 4, 8, 2022, 1988-1998.
- E. Chistou, J.R. Pearson, A.M. Beltrán, **Y. Fernández-Afonso, L. Gutiérrez, J. M. de la Fuente**, F. Gámez, M.L. García-Martín, C. Caro. *Iron–Gold Nanoflowers: A Promising Tool for Multimodal Imaging and Hyperthermia Therapy.* *Pharmaceutics*. 14, 3, 2022, 636.
- E. Arroyo, **B. Torres Herrero, J. M. de la Fuente**, M. Ocaña, A.I. Becerro. *Highly uniform Y₃Al₂Ga₃O₁₂-based nanophosphors for persistent luminescence bioimaging in the visible and NIR regions.* *Inorganic Chemistry Frontiers*. 2022.
- **E. Atrián-Blasco**, L. de Cremoux, X. Lin, R. Mitchell-Heggs, L. Sabater, S. Blanchard, C. Hureau. *Keggin-type polyoxometalates as Cu(II) chelators in the context of Alzheimer’s disease.* *Chemical Communications*. 58, 14, 2022, 2367-2370.
- D. García-Soriano, P. Milán-Rois, N. Lafuente-Gómez, C. Navío, **L. Gutiérrez**, L. Cussó, M. Desco, D. Calle, Á. Somoza, G. Salas. *Iron oxide-manganese oxide nanoparticles with tunable morphology and switchable MRI contrast mode triggered by intracellular conditions.* *Journal of Colloid and Interface Science*. 613, 2022, 447-460.

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- **G. Tommasini**, G. Dufil, F. Fardella, X. Strakosas, E. Fergola, T. Abrahamsson, D. Bliman, R. Olsson, M. Berggren, A. Tino, E. Stavrinidou, C. Tortiglione. *Seamless integration of bioelectronic interface in an animal model via in vivo polymerization of conjugated oligomers*. *Bioactive Materials*. 10, 2022, 107-116.
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- **Y. Fernández-Afonso**, **L. Asín**, **L. Beola**, **M. Moros**, **J. M. de la Fuente**, **R. Fratila**, **V. Grazú**, **L. Gutiérrez**. *Iron speciation in animal tissues using AC magnetic susceptibility measurements. Quantification of magnetic nanoparticles, ferritin and other iron-containing species*. DOI: 10.1021/acsabm.1c01200. *ACS Applied Bio Materials* 2022, 5, 5, 1879–1889.
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CONGRESOS

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- **Jesús Martínez de la Fuente.** Nanoactuators for therapy and diagnosis. COST Action CA17140 Final Conference. Roma, 25-26/10/2022. Charla invitada.
- **Isabel Franco Castillo,** Archismita Misra, Carolina González, Stéphanie Eyssautier Chuine, Esther García Guillén, Laura De Matteis, Clara Marquina; Jesús Martínez de la Fuente, Carsten Streb, Filomena Silva, Scott George Mitchell. *Hybrid nanomaterials and nanoparticles for the prevention of biodeterioration of cultural heritage objects.* Ciencia y Arte IX – Ciencias y tecnologías aplicadas a la conservación del patrimonio. Madrid, 17/10/2022- 19/10/2022. Comunicación oral.
- **Ilaria Armenia.** “HOTZYMES - The Development of Efficient Enzymatic Cascades in Well-Coordinated One-Pot-Systems”. Workshop Emerging Technologies on Biocatalysis: Present and Future Perspectives. Viena, 19/09/2022. Charla invitada.
- **María Moros Caballero.** Design of nanoactuators for tissue regeneration. 5th SBAN 2022 (Spanish Conference on Biomedical Applications of Nanomaterials. Madrid, 8 y 9/09/2022. Comunicación plenaria invitada.
- **J. Idiago López,** Eduardo Moreno-Antolín, **Valeria Grazú, Jesús Martínez de la Fuente, Raluca Fratila.** *Bioorthogonal click chemistry on living cell membranes: creating hotspots for transient increase of living cell membrane permeability.* 5th SBAN 2022 (Spanish Conference on Biomedical Applications of Nanomaterials. Madrid, 8 y 9/09/2022. Comunicación oral.
- **Yilian Fernández Afonso, Laura Asín, Lilianne Beola, Raluca Fratila, Lucía Gutiérrez.** *Magnetic Nanoparticle transformations and the effect on their heating properties.* 5th SBAN 2022 (Spanish Conference on Biomedical Applications of Nanomaterials. Madrid, 8 y 9/09/2022. Comunicación oral.
- **Regina Pamplona, Sandra González-Lana, Ignacio Ochoa, Rafael Martín-Rapún, Carlos Sánchez-Somolinos.** *Tuning of mechanical properties in photopolymerizable gelatin-based hydrogels for in vitro intestinal epithelial models.* 32nd Annual Conference of the European Society for Biomaterials (ESB 2022). Bordeaux (France), 4 to 8/09/2022. Póster.
- **Jesús Martínez de la Fuente.** *Nanoactuators for therapy and diagnosis.* 3rd NanoBIOCARGO Symposium on Design, development and production of nanocarriers and nanovehicles. Madrid, 18 y 19/07/2022. Charla invitada.
- **Zsuzsa Baranyai, Maria Alleva, Pablo Martínez Vicente, María Moros,** Ana C. Millán-Placer, Ana Picó, José A. Aínsa, **Jesús Martínez de la Fuente.** *Development of functionalized nanocarriers for drug targeting in tuberculosis,* Annual Meeting of the Controlled Release Society, CRS 2022. Montreal, Canada, 11 a 15/07/2022. Charla oral.
- **Ilaria Armenia.** *Nanobiocatalysis: opportunities for remote enzymatic control by nanuactuation.* IX Iberian Meeting on Colloids and Interfaces (RICI IX), Santiago de Compostela. 10 a 13/07/2022. Charla invitada.
- **Giuseppina Tommasini, Susel del Sol Fernández, Pablo Martínez Vicente, Pilar Gomollón Zueco, Raluca Fratila,** María del Puerto Morales, Claudia Tortiglione, **María Moros.** *Tuning heating efficiency of of $Mn_xFe_{3-x}O_4$ MNPs to trigger different biological effects in vitro and in vivo.* CIMTEC 2022. 9th Forum on New Materials. Perugia (Italia), 20 a 29/06/2022. Charla.
- **Pablo Martínez-Vicente.** Optimizing the functionalization of E-cadherin fragments on magnetic microparticles as a novel tool to study mechanotransduction. FEBS 2022 Advanced Course. Biological Surfaces and interfaces: Forces at biological interfaces. Sant Feliu de Guixols (Spain). 19 a 24/06/2022. Poster y charla oral.

- Víctor Garcés, Ana González, Natividad Gálvez; José M. Delgado-López, Jose J. Calvino; Susana Trasobares, **Yilian Fernández-Afonso; Lucía Gutiérrez**, José M. Domínguez-Vera Heterobimetallic probiotic bacteria as new oral magneto-optical hyperthermia agents, 13th International Conference on the Scientific and Clinical Applications of Magnetic Carriers. London (United Kingdom), 14 a 17/06/2022. Oral.
- David Serantes; Daniel Fahilde; Sergiu Ruta; **Yilian Fernández-Afonso; Lucía Gutiérrez**; Roy W. Chantrell. On the effective uniaxial anisotropy of magnetite nanoparticles, 13th International Conference on the Scientific and Clinical Applications of Magnetic Carriers. London (United Kingdom), 14 a 17/06/2022. Póster.
- **Lucía Gutiérrez Marruedo**. *Beyond classical magnetic hyperthermia: From innovative characterization approaches to new therapeutic alternatives*. 13th International Conference on the Scientific and Clinical Applications of Magnetic Carriers. London (United Kingdom), 14 a 17/06/2022. Charla invitada.
- **Raluca Fratila**. *Critical parameters to improve pancreatic cancer treatment using magnetic hyperthermia: Field conditions, immune response, and particle biodistribution*. 13th International Conference on the Scientific and Clinical Applications of Magnetic Carriers. London (United Kingdom), 14 a 17/06/2022. Comunicación oral.
- **Francesca Bussolari, Beatriz Torres, Iliaria Armenia**, Fernando López-Gallego, María del Puerto Morelaes, Lorena Betancor. *Magnetic heating to trigger entrapped enzymes activity*. 13th International Conference on the Scientific and Clinical Applications of Magnetic Carriers. London (United Kingdom), 14 a 17/06/2022. Comunicación oral.
- **Susel del Sol Fernández**. *Composition impacts the structural, magnetic, and heating efficiency of $Mn_xFe_{3-x}O_4$ MNPs. An in vitro and in vivo study*. 13th International Conference on the Scientific and Clinical Applications of Magnetic Carriers. London (United Kingdom), 14 a 17/06/2022. Comunicación oral.
- **Javier Idiago López**. *Combining bioorthogonal click chemistry and magnetic hyperthermia for siRNA transfection*. 13th International Conference on the Scientific and Clinical Applications of Magnetic Carriers. London (United Kingdom), 14 a 17/06/2022. Comunicación oral.
- **Iliaria Armenia**, Jesús G. Ovejero, David Serantes, Nicoll Zeballos, Fernando López-Gallego, **Jesús Martínez de la Fuente**, María del Puerto Morales, **Valeria Grazú**. Combining Iron Oxide Nanoparticles And Fluorescent Protein For Selective Magnetic Nanoheating Studies. 13th International Conference on the Scientific and Clinical Applications of Magnetic Carriers. London (United Kingdom), 14 a 17/06/2022. Póster.
- **Yilian Fernández-Afonso**, David Serantes, Sergiu Ruta, Samuel E. Rannala, **Raluca M. Fratila**, Sabino Veintemillas-Verdaguer, M. Puerto Morales, Roy W Chantrell, **Lucía Gutiérrez**. Reversible Chain Formation During Magnetic Hyperthermia Experiments. 13th International Conference on the Scientific and Clinical Applications of Magnetic Carriers. London (United Kingdom), 14 a 17/06/2022. Póster.
- **Yilian Fernández-Afonso, Laura Asín, Lilianne Beola, Raluca M. Fratila, Lucía Gutiérrez**. Magnetic nanoparticle transformations and the effect of their heating properties. 13th International Conference on the Scientific and Clinical Applications of Magnetic Carriers. London (United Kingdom), 14 a 17/06/2022. Póster.
- **Javier Idiago López, Yilian Fernández Afonso, Eduardo Moreno Antolín, Valeria Grazú, Lucía Gutiérrez, Jesús Martínez de la Fuente, Raluca M. Fratila**. Cell Membrane Hyperfluidization With Localized Magnetic And Optical Hyperthermia. 13th International Conference on the Scientific and Clinical Applications of Magnetic Carriers. London (United Kingdom), 14 a 17/06/2022. Póster.
- C. Castro-Hinojosa, S. Del Sol-Fernández, P. Martínez-Vicente, P. Gomollón-Zueco, Jesús G. Ovejero, Jesús Martínez de la Fuente, Raluca M. Fratila, María Moros. Oriented Immobilization Of Cadherin Fragments On Magnetic Nanoparticles As Novel Magneto-Mechanical Cell Actuators. 13th International

Conference on the Scientific and Clinical Applications of Magnetic Carriers. London (United Kingdom), 14 a 17/06/2022. Póster.

- **Maria Alleva, Zsuzsa Baranyai, María Moros, Rafael Martín-Rapún, Pablo Martínez Vicente, Jesús Martínez de la Fuente.** *Interaction between polysaccharide nanocapsules and biological barrier models.* 13th International Symposium on Polymer Therapeutics: from Laboratory to Clinical Practice. Valencia, 23 a 25/05/2022. Póster y charla oral.
- **Zsuzsa Baranyai, Maria Alleva, Pablo Martínez Vicente, María Moros,** Ana C. Millán-Placer, Ana Picó, José A. Aínsa, **Jesús Martínez de la Fuente.** *Antitubercular drug delivery with polysaccharide-based nanocarriers.* 13th International Symposium on Polymer Therapeutics: from Laboratory to Clinical Practice. Valencia, 23 a 25/05/2022. Póster.
- **Jesús Martínez de la Fuente.** NanoSpain Conference 2022. *Nanoactuators for therapy and diagnosis.* Madrid, 17 a 20/05/2022. Keynote.
- **Iliaria Armenia, Beatriz Torres,** Cecilia Ortiz, **Jesús Martínez de la Fuente,** Lorena Betancor, **ValeriaGrazú.** AMF-triggered cancer therapy using enzyme-silica nanohybrids. Conference on Advanced Materials and Devices for Nanomed (AMA4MED). Online meeting, 3 y 4/05/2022. Charla oral.
- **Jesús Martínez de la Fuente.** Nanoactuators for therapy and diagnosis. Conference on Advanced Materials and Devices for Nanomed (AMA4MED). Online meeting, 3 y 4/05/2022. Charla invitada.
- **Valeria Grazú.** Nanoactuators for cancer therapy. Conference on Advanced Materials and Devices for Nanomed (AMA4MED). Online meeting, 3 y 4/05/2022. Charla invitada.
- **Pablo Martínez-Vicente, Pilar Gomollón-Zueco, Christian Castro, J.M. de la Fuente, María Moros.** Controlling the specific interaction of living cells with magnetic microparticles functionalized with E-cadherin fragments. Conference on Advanced Materials and Devices for Nanomed (AMA4MED). Online meeting, 3 y 4/05/2022. Charla oral.
- **Susel Del Sol Fernández, G. Tommasini, Pablo Martínez-Vicente, Pilar Gomollón-Zueco, Christian Castro Hinojosa, Jesús Martínez de la Fuente, R. M. Fratila, C. Tortiglione, M. P. Morales Herrero, M Moros.** Tuning the composition of MnxFe3-xO4 MNPs: Synthesis and their comparative characterization for biomedical applications. Conference on Advanced Materials and Devices for Nanomed (AMA4MED). Online meeting, 3 y 4/05/2022. Póster.
- **Pilar Gomollón.** Optimizing the functionalization of magnetic microparticles with proteins to control the interaction with living cells. Conference on Advanced Materials and Devices for Nanomed (AMA4MED). Online meeting, 3 y 4/05/2022. Póster.
- **Gabriel Alfranca,** Claudia Olaizola, Iñaki Ochoa, Rosa Monge, **Carlos Sanchez-Somolinos, Jesús M.de la Fuente.** Point-of-care fluidic immunosensor chip based on near infrared-absorbing nanoparticles for cancer biomarker detection. Conference on Advanced Materials and Devices for Nanomed (AMA4MED). Online meeting, 3 y 4/05/2022. Póster.
- **Christian Castro-Hinojosa,** Jesús G. Ovejero, **Susel Del Sol-Fernández, Jesús Martínez de la Fuente, Valeria Grazú, Raluca M. Fratila, María Moros.** Synthesis of a cadherin-magnetic nanoparticle bioconjugate as a novel magneto-mechanical cell actuator. Conference on Advanced Materials and Devices for Nanomed (AMA4MED). Online meeting, 3 y 4/05/2022. Póster.

- **Yilian Fernández-Afonso, Laura Asin, Lilianne Beola, Raluca M. Fratila, Lucía Gutiérrez.** Evaluation of the properties and heating capacity of the magnetic nanoparticles during degradation process. Conference on Advanced Materials and Devices for Nanomed (AMA4MED). Online meeting, 3 y 4/05/2022. Póster.
- **Beatriz Torres, Iliaria Armenia, Cecilia Ortiz, Jesús Martínez de la Fuente, Lorena Betancor, Valeria Grazú.** Building enzyme nanohybrids for AMF-triggered cancer therapy. Conference on Advanced Materials and Devices for Nanomed (AMA4MED). Online meeting, 3 y 4/05/2022. Póster.
- **Giuseppina Tommasini, Francesca Di Maria, Mattia Zangoli, Marika Iencharelli, Angela Tino, María Moros, Claudia Tortiglione.** *Engineered living materials for biomedical application.* Conference on Advanced Materials and Devices for Nanomed (AMA4MED). Online meeting, 3 y 4/05/2022. Charla oral.
- **Beatriz Torres, Iliaria Armenia, Cecilia Ortiz, Jesús Martínez de la Fuente, Lorena Betancor, Valeria Grazú.** Building enzyme nanohybrids for AMF-triggered cancer therapy. International Conference on Nanomaterials Applied to Life Sciences NALS 2022, 27-29 abril 2022. Santander. Comunicación oral y póster.
- **Jesus G. Ovejero, Iliaria Armenia, Valeria Grazú, Maria del Puerto Morales.** *Magnetic Nanoparticles for the control of multi-enzymatic reactions.* NALS. Santander, 27 a 29/04/2022. Comunicación oral.
- **Pilar Gomollón-Zueco, J.M. de la Fuente, Pablo Martínez-Vicente and María Moros.** Optimizing the oriented cadherin fregments to magnetic microparticles to control their interaction with living cells. NALS. Santander, 27 a 29/04/2022. Comunicación oral flash.
- **María Moros Caballero.** *Hydra vulgaris: an evolutionarily conserved model system for testing nanomaterials ;* 2nd HOTZYMES Workshop on "NANOTOXICITY". Online, 15/03/2022. Charla invitada
- **Isabel Franco Castillo, Elena Atrián Blasco, Scott Mitchell.** *Nanomateriales antimicrobianos para prevenir el biodeterioro del Patrimonio Cultural.* I workshop Proyecto Bioactive-ILs. Castellón, 17 y 18/02/2022. Charla.
- **Scott Mitchell.** Using Polyoxometalate Materials as Multifunctional Coatings with Antimicrobial and Anticorrosive Properties. TMS Annual Meeting & Exhibition (Anaheim, U.S.A.) 27/02/2022-03/03/2022. Charla oral.
- **María Moros Caballero.** *Biological interactions of nanomaterials with model systems.* Ciclo de Conferencias del Instituto de Química Médica. Madrid, online. 24/02/2022. Charla invitada.
- **Isabel Franco-Castillo, Archismita Misra, Carolina González, Stéphanie Eyssautier-Chunie, Esther García Guillén, Laura de Matteis, Clara Marquina, Jesús Martínez de la Fuente, Carsten Streb, Filomena Silva, Scott G. Mitchell.** *Nanomateriales antimicrobianos para prevenir el biodeterioro del patrimonio cultural.* 9ª Jornada de Jóvenes Investigadores de Química y Física de Aragón. Facultad de Educación, Universidad de Zaragoza. 16/12/2021. Comunicación oral.
- **Jesús Martínez de la Fuente.** *Nanoactuators for Therapy and Diagnosis.* XIII Jornadas de la SEQT. Albacete, 20-22 octubre 2021. Charla invitada.
- **Lorena Ceamanos Fiances.** *Fast Photo-induced mechanical response for light-driven robotic functions with 4D printed liquid cristal elastomers.* Symposium NanoPrint21. Engineered Nanomaterials and Inks for Printed, Flexible and Interfacial Electronics. NanoGe Fall Meeting 2021. Online, 2021. Charla oral.
- **Carlos Sánchez Somolinos.** *Advanced manufacturing of polymeric materials: From molecule to application through processing.* Symposium NanoPrint21. Engineered Nanomaterials and Inks for Printed, Flexible and Interfacial Electronics. NanoGe Fall Meeting 2021. Online, 2021. Charla invitada.

- **Héctor Soria-Carrera, Elena Atrián-Blasco, Jesús Martínez de la Fuente, Scott G. Mitchell, Rafael Martín-Rapún.** *Polyoxometalate-polypeptide assemblies as peroxidase surrogates.* EMBO Workshop: Designing functional biomolecular assemblies: Beyond biology. Online, 28/09/2021 a 01/10/2021. Charla invitada.
- **Ilaria Armenia, Francesca Bussolari, Anisha Vyas, Eduardo Macedo de Melo, Nicole Zeballos, Jesús G. Ovejero, Juan M Bolivar, Sabino Veintemillas-Verdaguer, Jesús Martínez de la Fuente, María del Puerto Morales, Fernando López-Gallego, Dörte Rother, Bernd Nidetzky, Valeria Grazú Bonavia.** *Conjugating His-tagged Proteins to Magnetic Nanoparticles: Tips and Challenges.* MECP 2020⁺. Online, 13-16/09/2021. Póster.
- **Ilaria Armenia, Francesca Bussolari, Nicole Zeballos, Jesús G. Ovejero, Sabino Veintemillas-Verdaguer, Jesús Martínez de la Fuente, Fernando López-Gallego, María del Puerto Morales, Valeria Grazú Bonavia.** *Coupling Proteins to Magnetic Nanoparticles for Tuning their Properties by Magnetic Heating.* MECP 2020⁺. Online, 13-16/09/2021. Póster.
- **Isabel Franco-Castillo, Laura de Matteis, Clara Marquina, Esther García Guillén, Jesús Martínez de la Fuente, Filomena Silva, Scott G. Mitchell.** *Starvation Wars – Return of the MgO Nanoparticles against Moulds.* International Biodeterioration & Biodegradation Symposium (IBBS18). Online, 6 a 9/09/2021. Póster.
- **Beatriz Martín Gracia, Alba Martín-Barreiro, Carlos Cuestas Ayllón, Jesús Martínez de la Fuente, Valeria Grazú, María Moros.** *Challenges for the detection of prostate cancer derived EVs using gold nanoprisms as thermal transducers in lateral flow immunoassays.* Student Network on Extracellular Vesicles (SNEV). Online, 14 a 16/07/2021. Charla oral.
- **Beatriz Martín-Gracia, Alba Martín Barreiro, Carlos Cuestas-Ayllón, Jesús Martínez de la Fuente, Valeria Grazú, María Moros.** *Development of novel thermo lateral flow immunoassay for a fast and sensitive detection of prostate cancer derived evs.* TRAIN-EV International Conference. Online, 30/06/2021. Charla oral.
- **Beatriz Martín-Gracia, Alba Martín Barreiro, Carlos Cuestas-Ayllón, Valeria Grazú, Jesús Martínez de la Fuente, Valeria Grazú, María Moros.** *Development of an ultra sensitive lateral flow immunoassay based on the use of gold nanoprism to detect prostate cancer derived exosomes.* European Optical Society Annual Meeting (EOSAM) 2021. Rome (Italy), 2021. Charla invitada.
- **Beatriz Torres Herrero, Ilaria Armenia, Cecilia Ortiz, Jesús Martínez de la Fuente, Lorena Betancor, Valeria Grazú Bonavia.** *Building enzyme nanohybrids for activity remote triggering.* Biotrans 2021. Online, 19-22/07/2021. Póster.
- **Francesca Bussolari, Christian W. Castro, Ilaria Armenia, Jesús G. Ovejero, María Moros Caballero, Raluca M. Fratila, María del Puerto Morales, Jesús Martínez de la Fuente, Valeria Grazú.** *Towards proteins shape and size effects in the immobilization on magnetic nanoparticles.* Biotrans 2021. Online, 19-22/07/2021. Póster.
- **Jesús Martínez de la Fuente.** *Nanoactuators for Therapy and Diagnosis.* 31st Conference of the European Society for Biomaterials (ESB 2021). Online, 5 a 9/09/2021. Keynote speaker.
- **Sandra González Lana, Teodora Randelovic, Rosa Monge, Jesús Ciriza, Ignacio Ochoa, Carlos Sánchez Somolinos.** *Surface functionalization to control biomimetic mechanical environment in cop based microfluidic devices.* EUROoCS 2021. Online, 1 y 2/07/2021. Póster.

- **Lilianne Beola, Valeria Grazú, Yilian Fernández Afonso, Raluca M. Fratila, Jesús Martínez de la Fuente, Laura Asín, Lucía Gutiérrez.** *Pancreatic cancer treatment using magnetic hyperthermia.* Nanotech France 2021. Online, 23-25/06/2021. Charla invitada.
- **Susel del Sol Fernández, O.F. Odio, P.M Crespo, O. Pérez, Gorka Salas, Lucía Gutiérrez, E. Reguera, M^a del Puerto Morales.** *Harmonizing structural and magnetic properties of manganese-iron oxide nanoparticles with heating efficiency: From spheres to flower and cube-like nanoparticles.* 4th SBAN Conference (Spanish Conference on Biomedical Applications of Nanomaterials). Online, 2 a 4/06/2021. Comunicación oral.
- David García-Soriano, Paula Milán-Rois, Nuria Lafuente-Gómez, Cristina Navío, **Lucía Gutiérrez**, Lorena Cussó, Manuel Desco, Daniel Calle, Álvaro Somoza, Gorka Salas. *Synthesis of iron oxide-manganese oxide hybrid nanoparticles, with tunable shell and morphology, for magnetic heating and switchable T2-to-T1 MRI contrast triggered by intracellular conditions.* 4th SBAN Conference (Spanish Conference on Biomedical Applications of Nanomaterials). Online, 2 a 4/06/2021. Comunicación oral.
- **Iliaria Armenia, Jesús G. Ovejero, Nicoll Zeballos Lema, Fernando López-Gallego, M. Puerto Morales, Jesús Martínez de la Fuente, Valeria Grazú Bonavia.** *Magnetic nanoparticles coated with metallic hydroxides as supports for protein purification and immobilization.* 4th SBAN Conference (Spanish Conference on Biomedical Applications of Nanomaterials). Online, 2 a 4/06/2021. Comunicación oral.
- **Beatriz Torres Herrero, Iliaria Armenia, Cecilia Ortiz, Jesús Martínez de la Fuente, Lorena Betancor, Valeria Grazú Bonavia.** *Enzyme and MNPs co-entrapment for enzymatic pro-drug therapy.* 4th SBAN Conference (Spanish Conference on Biomedical Applications of Nanomaterials). Online, 2 a 4/06/2021. Comunicación oral.
- **Francesca Bussolari, Christian W. Castro, Iliaria Armenia, Jesús G. Ovejero, María Moros Caballero, Raluca M. Fratila, M^a del Puerto Morales, Jesús Martínez de la Fuente, Valeria Grazú Bonavia.** *From monomeric to multimeric His-tag proteins conjugation to magnetic nanoparticles through NTA-Me²⁺: shape and size effects.* 4th SBAN Conference (Spanish Conference on Biomedical Applications of Nanomaterials). Online, 2 a 4/06/2021. Comunicación oral.
- **Beatriz Martín Gracia.** *Challenges for the detection of urine extracellular vesicles using thermo lateral flow immunoassays* 4th SBAN Conference (Spanish Conference on Biomedical Applications of Nanomaterials). Online, 2 a 4/06/2021. Póster.
- **Pilar Gomollón Zueco, Christian Castro, Jesús Martínez de la Fuente, Pablo Martínez-Vicente, María Moros.** *Optimizing the functionalization of magnetic microparticles with E-Cadherin fragments to control the interaction with living cells.* 4th SBAN Conference (Spanish Conference on Biomedical Applications of Nanomaterials). Online, 2 a 4/06/2021. Póster.
- **Javier Idiago López.** *From bench to cell: a roadmap for assessing the bioorthogonal reactivity of magnetic nanoparticles.* 4th SBAN Conference (Spanish Conference on Biomedical Applications of Nanomaterials). Online, 2 a 4/06/2021. Póster.
- **Lilianne Beola, Laura Asín, Catarina Roma-Rodrigues, Yilian Fernández Afonso, Raluca M. Fratila, David Serantes, Sergio Ruta, Roy W. Chantrell, Alexandra R. Fernandes, Pedro V. Baptista, Jesús Martínez de la Fuente, Valeria Grazú, Lucía Gutiérrez.** *Dependence of intracellular magnetic nanoparticles amount in the apoptotic death pathway triggered by magnetic hyperthermia treatment.* 4th SBAN Conference (Spanish Conference on Biomedical Applications of Nanomaterials). Online, 2 a 4/06/2021. Póster.

- **Ylian Fernández Afonso**, L. Porta-Velilla, M^a del Puerto Morales, Sabino Veintemillas-Verdaguer, **Lucía Gutiérrez**, M. Castro. *Specific absorption rate and photothermal efficiency of colloidal iron oxides nanoparticle suspensions*. 4th SBAN Conference (Spanish Conference on Biomedical Applications of Nanomaterials). Online, 2 a 4/06/2021. Póster.
- **María Alleva**, **Zsuzsa Baranyai**, **María Moros**, **Rafael Martín-Rapún**, **Pablo Martínez-Vicente**, **Jesús Martínez de la Fuente**. *Study of the interaction between polysaccharide nanocapsules and biological barriers for the targeted administration of drugs*. 4th SBAN Conference (Spanish Conference on Biomedical Applications of Nanomaterials). Online, 2 a 4/06/2021. Póster.
- **Beatriz Martín Gracia**. *Development of an ultrasensitive lateral flow immunoassay based on the use of gold nanoprisms to detect prostate cancer derived exosomes*. RSC Chemical Nanosciences & Nanotechnology Early Careers Virtual Meeting. Online, 24/03/2021. Póster.
- **Isabel Franco-Castillo**, A. Misra, **Elena Atrián-Blasco**, A.G. Enderle, **Jesús Martínez de la Fuente**, A. Koziróg, A. Otlewska, M. Piotrowska, K. Rajkowska, S. Eyssautier-Chuine, C. Strev, **Scott G. Mitchell**. *Polyoxometalate-Ionic Liquids (POM-ILs) as anticorrosion and antibacterial coatings for natural stones*. RSC Chemical Nanosciences & Nanotechnology Early Careers Virtual Meeting. Online, 24/03/2021. Póster.
- **Héctor Soria-Carrera**, **Isabel Franco-Castillo**, Pilar Romero-Soria, Santiago Martín-Solans, **Jesús Martínez de la Fuente**, **Scott G. Mitchell**, **Rafael Martín-Rapún**. *Polyoxometalate-polypeptide assemblies as peroxidase surrogates*. RSC Chemical Nanosciences & Nanotechnology Early Careers Virtual Meeting. Online, 24/03/2021. Póster.
- **Javier Idiago-López**, **Eduardo Moreno-Antolin**, **Jesús Martínez de la Fuente**, **Valeria Grazú**, **Raluca M. Fratila**. *Bioorthogonal click chemistry and magnetic hyperthermia on living cell membranes: a novel strategy for cell transfection*. RSC Chemical Nanosciences & Nanotech Early Career Virtual Poster Symposium. Online, 24/03/2021. Póster.
- **Zsuzsa Baranyai**, **María Alleva**, **Pablo Martínez-Vicente**, **Jesús Martínez de la Fuente**. *Synthesis and characterization of antitubercular drug-loaded functionalized nanocapsules*. RSC Chemical Nanosciences & Nanotechnology Early Career Virtual Poster Symposium. Online, 24/03/2021. Póster.
- **Jesús Martínez de la Fuente**. *Nanoactuators for Therapy and Diagnosis*. Chemical Nanosciences & Nanotech Early Career Virtual Poster Symposium. Online, 24/03/2021. Charla plenaria.
- **Javier Idiago López**, **Eduardo Moreno Antolín**, **Jesús Martínez de la Fuente**, **Raluca M. Fratila**. *Bioorthogonal click chemistry and magnetic hyperthermia on living cell membranes: a novel strategy for cell transfection*. RSC Chemical Biology Symposium. Online, 11 y 11/05/2021. Póster.
- **Scott G. Mitchell**. *Using polyoxometalates as multifunctional coatings, scaffolds and supramolecular self-assembly tools*. Online, 24/02/2021. CIC-biomaGUNE. Seminario invitado.
- **María Moros**. *Biological interactions of nanomaterials with model systems*. Seminario invitado INMA-impulso. 17/03/2021.
- **María Moros**. *Biological interactions of nanomaterials with model systems*. Master of Applied Materials Chemistry-Universidad de Barcelona. 26/03/2021. Charla invitada.
- **María Moros**. *Remote control of cellular signalling triggered by magnetic switching*. Workshop: Crafting a Winning ERC proposal organizado por la Academia Joven de España. 18/02/2021. Charla invitada.

- **María Moros.** *Remote control of cellular signalling triggered by magnetic switching.* Workshop: MSCA-ERC organized by CSIC. 16/02/2021. Charla invitada.
- **Francesca Bussolari, Iliaria Armenia, Beatriz Torres Herrero,** Nicole Zeballos, Jesús G. Ovejero, Sabino Veintemillas-Verdaguer, **Jesús Martínez de la Fuente,** Fernando López-Gallego, María del Puerto Morales, **Valeria Grazú.** *Toward His-Tag Enzyme Conjugation to Magnetic Nanoparticles for controlling biocatalysts through nanoactuation triggered by Alternate Magnetic Fields.* V JICI (Reunión nacional de Jóvenes Investigadores en Coloides e Interfases). Zaragoza, 2-4/03/2020. Comunicación oral.
- **Beatriz Martín-Gracia, Alba Martín-Barreiro, Carlos Cuestas-Ayllón, Jesús Martínez de la Fuente, Valeria Grazú, María Moros.** *Exosomes as tumoral biomarkers: development of a lateral flow immunoassay to detect prostate cancer derived exosomes in urine samples.* GEIVEX/TeNTaCLES Minisymposium. Online, 17-12-2020. Vídeo breve.
- **Andrés Seral-Ascaso,** R. Lahoz, P. Marín, C. Ania, M. Laguna, G.F. de la Fuente, R. Garriga, E. Muñoz. *Carbon nanofoams: Tailored laser ablation production, structure, processing, and applications.* Carbon Materials and Nanotechnology (CMAN). Online, 29/09/2020. Comunicación oral.
- **Andrés Seral-Ascaso,** V. Nicolosi. *Templated synthesis of novel 2D nanomaterials.* V JICI (Reunión nacional de Jóvenes Investigadores en Coloides e Interfases). Zaragoza, 2-4/03/2020. Comunicación oral.
- **Andrés Seral-Ascaso,** Francisco Javier Serón Torrecilla. *Presión e hidrostática contextualizados en 20.000 leguas de viaje submarino.* CIVINEDU 2020. Online, 23-24/09/2020. Comunicación oral.
- **Regina Pamplona, Rafael Martín-Rapún, Carlos Sánchez-Somolinos.** *Methacrylated-gelatin hydrogels as in vitro 3D models: preparation and characterization.* V JICI (Reunión nacional de Jóvenes Investigadores en Coloides e Interfases). Zaragoza, 2-4/03/2020. Comunicación oral.
- **Alba Martín-Barreiro, Jesús Martínez de la Fuente, Valeria Grazú.** *Implementing thermal nanotransducers as labels for immunosorbent assay (Thermo-ELISA).* V JICI (Reunión nacional de Jóvenes Investigadores en Coloides e Interfases). Zaragoza, 2-4/03/2020. Comunicación oral.
- **Isabel Franco Castillo,** A. Misra, C. González, S. Eyssautier-Chuine, E. García Guillén, L. De Matteis, C. Marquina, **Jesús Martínez de la Fuente,** C. Streb, F. Silva, **Scott G. Mitchell.** *Hybrid nanomaterials and nanoparticles for the prevention of biodeterioration of cultural heritage objects.* V JICI (Reunión nacional de Jóvenes Investigadores en Coloides e Interfases). Zaragoza, 2-4/03/2020. Comunicación oral.
- **Lucía Gutiérrez.** *Hybrid PET and T1 MRI agents for atherosclerosis detection.* XIV Jornadas anuales CIBER-BBN. Online, 16-17/11/2020. Charla invitada.
- **Scott G. Mitchell.** *Nanomateriales antimicrobianos para prevenir el biodeterioro en objetos patrimoniales.* Bienal ibérica de patrimonio cultural. Online, 26-28/11/2020. Charla invitada.
- **María Moros.** *Transporte y liberación de fármacos basados en Nanopartículas - panorama actual.* Ciclos Web de la Sección Química de la PUCP. Online, 29/10/2020. Charla invitada.
- **María Moros.** *Nanoparticle-based drug delivery systems: where are we now.* Jornada de bienvenida del máster NANOMAT. Zaragoza, 14/09/2020. Charla invitada.
- **Eduardo Moreno-Antolín, Christian Castro, Javier Idiago-López, Jesús Martínez de la Fuente, Valeria Grazú, María Moros, Raluca M. Fratila.** *Versatile and controllable functionalization of magnetic nanoparticles*

- with cadherins*. 3rd SBAN Conference (Spanish Conference on Biomedical Applications of Nanomaterials). Online, 03/09/2020. Póster.
- **Zsuzsa Baranyai, Jesús Martínez de la Fuente**. *Functionalized nanocapsules for antitubercular drug delivery to macrophages*. 3rd SBAN Conference (Spanish Conference on Biomedical Applications of Nanomaterials). Online, 03/09/2020. Póster.
 - **Héctor Soria-Carrera, Ernesto Anoz-Carbonell, Ainhoa Lucía, Laura De Matteis, José A. Ainsa, Jesús Martínez de la Fuente, Rafael Martín-Rapún**. 3rd SBAN Conference (Spanish Conference on Biomedical Applications of Nanomaterials). Online, 03/09/2020. Póster.
 - **Maria Alleva, Álvaro Casadomé-Perales, Laura De Matteis, Cristina Infantes-Rodríguez, Irene Palomares-Pérez, Takashi Saito, Takaomi C Saido, José Antonio Esteban, Ángel R. Nebreda, Carlos G. Dotti, Jesús Martínez de la Fuente**. *Inhibition of p38 MAPK in the brain through nasal administration of p38 inhibitor loaded in chitosan nanocapsules*. 3rd SBAN Conference (Spanish Conference on Biomedical Applications of Nanomaterials). Online, 03/09/2020. Póster.
 - **Inés Serrano-Sevilla, Álvaro Artiga, Y. Hernández, Laura De Matteis, Scott G. Mitchell, Jesús Martínez de la Fuente**. *Entrapment of gold nanoparticles within chitosan nanocapsules for oral administration*. 3rd SBAN Conference (Spanish Conference on Biomedical Applications of Nanomaterials). Online, 03/09/2020. Póster.
 - **Javier Idiago-López, Eduardo Moreno-Antolin, Jesús Martínez de la Fuente, Valeria Grazú, Raluca M. Fratila**. *Bioorthogonal click chemistry and magnetic hyperthermia on living cell membranes: a novel strategy for cell transfection*. 3rd SBAN Conference (Spanish Conference on Biomedical Applications of Nanomaterials). Online, 03/09/2020. Póster.
 - **David García Soriano, P. Milán-Rois, N. Lafuente-Gómez, Rebeca Amaro, C. Navío, F. Herranz, A. Somoza, Lucía Gutiérrez, Gorka Salas**. *Cation incorporation and leaching in $MnxFe_{3-x}O_4$ nanoparticles and its influence on properties for biomedical applications*. V JICI (Reunión nacional de Jóvenes Investigadores en Coloides e Interfases), Zaragoza, 2-4/03/2020. Comunicación oral.
 - **Lucía Gutiérrez Marruedo**. *Magnetic Hyperthermia for Cancer Treatment: past problems, ongoing work and future possibilities*. ImagineNano2020. Online, 29/09-01/10/2020. Charla invitada.
 - **Regina Pamplona**. *Cocinando gelatina para células: geles 3D para mimetizar la matriz extracelular*. III workshop de NanoOncología. Zaragoza, 14-15/01/2020. Charla invitada.
 - **Beatriz Martín-Gracia**. *Development of novel plasmonic biosensors for detection of tumoral biomarkers and exosomes*. III workshop de NanoOncología. Zaragoza, 14-15/01/2020. Charla invitada.
 - **Yilian Fernández-Afonso, G. Salas, I. Fernández-Barahona, F. Herranz, C. Grüttner, Jesús Martínez de la Fuente, M. P. Morales, Lucía Gutiérrez**. *Development of magnetic nanoparticle characterization methods using a smartphone*. 3rd SBAN Conference (Spanish Conference on Biomedical Applications of Nanomaterials). Online, 03/09/2020. Póster.
 - **Álvaro Gallo-Cordova, A. Espinosa, A. Serrano, Lucía Gutiérrez, N. Menéndez, María del Puerto Morales, E. Mazario**. *Fast and Efficient Microwave Assisted Synthesis of Magnetic Ferrite Nanoparticles*. 3rd SBAN Conference (Spanish Conference on Biomedical Applications of Nanomaterials). Online, 03/09/2020. Póster.

- V. Garcés, A. González, L. Sabio, **Lucía Gutiérrez**, M. García, N. Gálvez, J. M. Delgado, J. M. Domínguez-Vera. *Metal nanoparticles onto probiotic bacteria for hyperthermia therapy*. 3rd SBAN Conference (Spanish Conference on Biomedical Applications of Nanomaterials). Online, 03/09/2020. Póster.
- D. García-Soriano, Rebeca Amaro, N. Lafuente-Gómez, P. Rois, A. Somoza, C. Navío, F. Herranz, **Lucía Gutiérrez**, Gorka Salas. *The influence of cation incorporation and leaching in the properties of Mn-doped nanoparticles for biomedical applications*. 3rd SBAN Conference (Spanish Conference on Biomedical Applications of Nanomaterials). Online, 03/09/2020. Póster.
- **Lilianne Beola**, Valeria Grazú, **Yilian Fernández**, **Raluca M. Fratila**, M. de las Heras, **Jesús Martínez de la Fuente**, **Lucía Gutiérrez**, **Laura Asín**. *Dependence of the intratumoral nanoparticle accumulation on the magnetic hyperthermia treatment effectiveness: an in vitro and in vivo study*. 3rd SBAN Conference (Spanish Conference on Biomedical Applications of Nanomaterials). Online, 03/09/2020. Póster.
- **Yilian Fernández-Afonso**, Gorka Salas, I. Fernández-Barahona, F. Herranz, C. Grüttner, **Jesús Martínez de la Fuente**, María del Puerto Morales, **Lucía Gutiérrez**. *Smartphone-based colorimetric method to quantify iron concentration and to determine the nanoparticle size from magnetic nanoparticles suspensions*. V JICI (Reunión nacional de Jóvenes Investigadores en Coloides e Interfases). Zaragoza, 03/09/2020. Comunicación oral.
- L. Porta-Velilla, **Yilian Fernández-Afonso**, María del Puerto Morales, **Lucía Gutiérrez**, M. Castro. *Photothermal Specific Absorption Rate of Iron Oxides nanoparticle suspensions*. V JICI (Reunión Nacional de Jóvenes Investigadores en Coloides e Interfases). Zaragoza, 2-4/03/2020. Comunicación oral.
- **Lilianne Beola**, Valeria Grazú, **Yilian Fernández**, **Raluca M. Fratila**, M. de las Heras, **Jesús Martínez de la Fuente**, **Lucía Gutiérrez**, **Laura Asín**. *Influence of the magnetic nanoparticles biodistribution on the cytotoxicity mechanisms triggered by magnetic hyperthermia*. V JICI (Reunión de Jóvenes investigadores en Coloides e Interfases). Zaragoza, 2-4/03/2020. Comunicación oral.
- **Laura Asín**. *Claves para la estandarización de los ensayos de hipertermia magnética como terapia antitumoral*. III Workshop en NanoOncología. Zaragoza, 14-15/01/2020. Charla invitada.
- **Jesús Martínez de la Fuente**. *Escenarios del diagnóstico de la COVID-19 en Iberoamérica: la pandemia y la nueva normalidad*. Webinar. 21/08/2020. Charla invitada.
- **Jesús Martínez de la Fuente**. *Hybrid nanoparticles for Therapy and Diagnosis: New Biotechnological Changes for Hyperthermia*. XIV Young Science Symposium (online). 08/07/2020. Comunicación oral.
- **Jesús Martínez de la Fuente**. *Nanomaterials for biomedical applications*. 2nd REARBOVIR Workshop, Zaragoza, 10/03/2020. Charla invitada.
- **Jesús Martínez de la Fuente**. *European Projects Successful Stories*. BNN Networking Event (online). 27/02/2020. Charla invitada.
- **Scott G. Mitchell**. *Nanomateriales antimicrobianos para prevenir el biodeterioro en objetos patrimoniales*. Universidad ORT Uruguay, Montevideo, Ciclos de Seminarios Web, 22 mayo 2020. Charla invitada.
- **Scott G. Mitchell**. *The importance of storytelling in a transformative scientific presentation. virtual Heterogeneous Catalysis PIONEER School (ITN-MSCA <https://www.co2pioneer.eu/>)* Instituto de Carboquímica (ICB-CSIC), 29 mayo 2020. Charla invitada.

- **Lucía Gutiérrez.** *Magnetic Hyperthermia for cancer treatment: current problems and new opportunities.* BioMapp. Bilbao, 5/12/2019. Charla invitada.
- **Héctor Soria-Carrera, Isabel Franco Castillo, P. Romero, S. Martín, Jesús Martínez de la Fuente, Scott G. Mitchell, Rafael Martín-Rapún.** *On-POM polymerisation of N-Carboxyanhydrides: towards new antimicrobial hybrid materials.* XVI simposio de jóvenes investigadores de la Real Sociedad Española De Química, RSEQ – Sigma Aldrich (Merck). Valencia, 4-7/11/2019. Póster.
- **Elena Atrián-Blasco, R. Mitchell-Heggs, Scott G. Mitchell, Sébastien Blanchard, C. Hureau.** *Use of polyoxometalates as bioinorganic tools: from Alzheimer's disease to biofilm disruption.* XVI simposio de jóvenes investigadores de la Real Sociedad Española De Química, RSEQ – Sigma Aldrich (Merck). Valencia, 4-7/11/2019. Charla oral.
- **Isabel Franco Castillo, A. Misra, S. Eyssautier, Jesús Martínez de la Fuente, C. Streb, Scott G. Mitchell.** *Molecular and nanomaterials for heritage conservation.* XVI simposio de jóvenes investigadores de la Real Sociedad Española De Química, RSEQ – Sigma Aldrich (Merck). Valencia, 4-7/11/2019. Charla oral.
- **Beatriz Martín-Gracia, Alba Martín-Barreiro, Jesús Martínez de la Fuente, Valeria Grazú, María Moros.** *Development of an ultrasensitive lateral flow immunoassay based on the use of gold nanoprisms to detect prostate cancer derived exosomes.* 5th International GEIVEX 2019 Symposium. Granada, 6-8/11/2019.
- **Isabel Franco Castillo, A. Misra, S. Eyssautier, Jesús Martínez de la Fuente, C. Streb, Scott G. Mitchell.** *Molecular and hybrid materials to prevent biodeterioration of cultural heritage objects.* CIBER BBN annual conference. Tarragona, 21-22/10/2019. Póster.
- **Lucía Gutiérrez.** *Nanopartículas magnéticas para o tratamento do cancro.* Xornada sobre a Ciencia dos materiais con perspectiva de xénero. Vigo, 18/10/2019. Charla invitada.
- **Raluca Fratila.** *Localized magnetic nanoheating - generating hotspots with iron oxide-based nanoparticles.* IUMRS-ICA International Conference. Perth (Australia), 22-26/09/2019. Charla invitada.
- **Raluca Fratila.** *Localized hyperthermia as a tool for cell membrane hyperfluidization.* IUMRS-ICA International Conference. Perth (Australia), 22-26/09/2019. Comunicación oral.
- **Lucía Gutiérrez.** *A link between magnetic nanoparticles biodistribution and the effect of magnetic hyperthermia in cancer treatment.* IUMRS-ICA International Conference. Perth (Australia), 22-26/09/2019. Comunicación oral.
- **Lucía Gutiérrez.** *AC magnetic susceptibility: A tool to track the transformations of magnetic nanoparticles.* IUMRS-ICA International Conference. Perth (Australia), 22-26/09/2019. Charla invitada.
- **Lucía Gutiérrez.** *Alternative approaches for the use of hyperthermia in cancer treatment.* Frontiers in BioMagnetic Particles VI Conference. Telluride (USA), 5-7/09/2019. Charla invitada.
- **María Moros, Anna Lewinska, Francesco Merola, Pietro Ferraro, Maciej Wnuk, Angela Tino, Claudia Tortiglione.** *Unravelling plasmonic photothermal cell death mechanisms mediated by gold nanorods and nanoprisms in vitro and in vivo.* 17. SPIE, Photonic West 2019. San Francisco (USA), 2019. Charla invitada.
- **María López-Valdeolivas, D. Liu, D. J. Broer, Carlos Sánchez-Somolinos.** *4D printing of liquid crystal elastomers towards soft-robotic functions.* SPIE, Photonic West 2019, San Francisco (USA), 2019. Charla invitada.

- **María López-Valdeolivas**, D. Liu, D. J. Broer, **Carlos Sánchez-Somolinos**. *4D printing of liquid crystal elastomers towards soft-robotic functions*. SPIE Security + Defence 2019. Estrasburgo. 2019. Charla invitada.
- **María López-Valdeolivas**, D. Liu, D.J. Broer, **Carlos Sánchez-Somolinos**. *4D printing of liquid crystal elastomers*. International Liquid Crystal Elastomers Conference (ILCEC2019). Eindhoven, 2019. Charla invitada.
- **Jesús Martínez de la Fuente**. *A photothermal lateral flow test for visual point of care detection*. Controlled Release Society Annual Meeting & Exposition. Valencia, 21-24/07/2019. Charla invitada.
- **Lucía Gutiérrez**. *AC magnetic susceptibility: A tool to track the transformations of magnetic nanoparticles*. 2nd Workshop on Magnetic Nanoparticles for Hyperthermia Challenges and opportunities. Santiago de Compostela, 15/07/2019. Charla invitada.
- **Jesús Martínez de la Fuente**. *Studying the heat effect of nanoparticles*. 3rd Annual Meeting. From bench to bedside: diagnosis, therapy and data analysis. Vigo, 1-2/07/2019. Charla invitada.
- **Jesús Martínez de la Fuente**. *A photothermal lateral flow test for visual point of care detection*. *Light and Life*. 17th International Congress on Photobiology, 18th Congress of the European Society for Photobiology. Barcelona, 25-30/08/2019. Charla invitada.
- Álvaro Artiga, Francisco Ramos-Sánchez, **Sonia García-Embid**, Inés Serrano-Sevilla, Laura De Matteis, **Scott G. Mitchell**. *Innovative Inkjet printed encapsulation of gold nanoparticles inside celladhesive chitosan hydrogels for oral administration*. EMRS2019. Niza, 27-31/05/2019. Charla oral.
- **Isabel Franco Castillo**, Archismita Misra, Daniel P. Müller, Carolina González, Stéphanie Eyssautier-Chuine, Andreas Ziegler, **Jesús Martínez de la Fuente**, **Scott G. Mitchell**, Carsten Streb. *Molecular and hybrid nanomaterials for the prevention of biodeterioration of cultural heritage objects*. EMRS2019. Niza, 27-31/05/2019. Charla oral.
- **Sonia García-Embid**, Francesca Di Renzo, Laura De Matteis, Nicoletta Spreti, **Jesús M. de la Fuente**. *Magnetic separation and high reusability of chloroperoxidase entrapped in multi polysaccharide micro-supports*. EMRS2019. Niza, 27-31/05/2019. Charla oral.
- **Eduardo Moreno-Antolín**, **Jesús Martínez de la Fuente**, **Valeria Grazú**, **Raluca M. Fratila**, **Javier Idiago-López**. *Same tool, different applications: localized magnetic nanoheating for cell membrane manipulation and controlled release*. XXXVII Reunión Biental de la Real Sociedad Española de Química. San Sebastián, 2019. Charla oral.
- **Eduardo Moreno-Antolín**, **Jesús M. de la Fuente**, **Valeria Grazú**, **Raluca M. Fratila**, **Javier Idiago-López**. *Bioorthogonal click chemistry and magnetic hyperthermia: a novel strategy for cell transfection*. XXXVII Reunión Biental de la Real Sociedad Española de Química. San Sebastián, 2019. Comunicación flash.
- **Raluca M. Fratila**. *Biofunctionalization of magnetic nanoparticles for magnetic hyperthermia applications*. School of Molecular Sciences seminar. University of Western Australia. Perth, 2019. Seminario invitado.
- **Raluca M. Fratila**. *Synthesis and functionalization of magnetic nanoparticles for biomedical applications*. Molecular Horizons Seminars. University of Wollongong. Australia, 2019. Seminario invitado.
- Álvaro Artiga Folch, Inés Serrano-Sevilla, Laura De Matteis, **Scott G. Mitchell**, **Carlos Sánchez-Somolinos**, **Jesús Martínez de la Fuente**. *Inkjet printing: a novel technology for gold nanoparticles encapsulation*. 2nd

SBAN Conference (Spanish Conference on Biomedical Applications of Nanomaterials). Madrid, 6-7/06/2019. Póster.

- **Jesús Martínez de la Fuente.** *New Biotechnological Challenges for Magnetic Hyperthermia.* 2nd SBAN Conference (Spanish Conference on Biomedical Applications of Nanomaterials). Madrid, 6-7/06/2019. Charla invitada.
- **Raluca Fratila.** *Bioorthogonal chemistry for covalent immobilization of magnetic nanoparticles on living cell membranes.* 2nd SBAN Conference (Spanish Conference on Biomedical Applications of Nanomaterials). Madrid, 6-7/06/2019. Comunicación oral.
- **María Alleva, María Moros, Laura de Matteis, Jesús Martínez de la Fuente.** *Study of the interaction between polysaccharide nanocapsules and nasal mucosa epithelium for the intranasal administration of drugs for Alzheimer's disease.* 2nd SBAN (Spanish Conference on Biomedical Applications of Nanomaterials). Madrid, 6-7/06/2019. Póster.
- **Javier Idiago-López, Eduardo Moreno-Antolín, Jesús Martínez de la Fuente, Valeria Grazú, Raluca M. Fratila.** *Bioorthogonal click chemistry on living cell membranes: the frontiers of metabolic glycoengineering and the functionalization of magnetic nanoparticles.* 2nd SBAN Conference (Spanish Conference on Biomedical Applications of Nanomaterials). Madrid, 6-7/06/2019. Póster.
- **Eduardo Moreno-Antolín, Christian Castro, Javier Idiago-López, Jesús Martínez de la Fuente, Valeria Grazú, María Moros, Raluca M. Fratila.** *Cadherins as a tool to attach magnetic nanoparticles to the cell membrane.* 2nd SBAN Conference (Spanish Conference on Biomedical Applications of Nanomaterials). Madrid, 6-7/06/2019. Póster.
- **Lilianne Beola, Yilian Fernández, Raluca M. Fratila, Jesús Martínez de la Fuente, Valeria Grazú, Laura Asín, Lucía Gutiérrez.** *The fate of magnetic nanoparticles after intratumoral injection.* 2nd SBAN Conference (Spanish Conference on Biomedical Applications of Nanomaterials). Madrid, 6-7/06/2019. Póster.
- **Rafael Ramírez-Jiménez, E. Quagliarini, Francesca Bussolari, Laura Asín, Rafael Martín-Rapún, L. Gentilucci, Jesús Martínez de la Fuente.** *Functionalization of gold nanoparticles with peptidomimetics as a targeted therapy for multiple sclerosis.* 2nd SBAN Conference (Spanish Conference on Biomedical Applications of Nanomaterials). Madrid, 6-7/06/2019. Póster.
- **Beatriz Martín-Gracia, I. Bolsa, Jesús Martínez de la Fuente, Valeria Grazú, María Moros.** *Exosomes as tumoral biomarkers: devising an efficient and economical purification strategy based on magnetic immunconjugates.* 2nd SBAN Conference (Spanish Conference on Biomedical Applications of Nanomaterials). Madrid, 6-7/06/2019. Póster.
- **Arschimita Misra, Isabel Franco Castillo, Jesús Martínez de la Fuente, Stéphane Eyssautier, Carsten Streb, Scott G. Mitchell.** *Modular molecular and hybrid nanomaterials to prevent biodeterioration of heritage objects.* Heritage Science and Technologies, París, 13-16/02/2019. Póster.
- **A. Claro, T. Ferreira, Scott Mitchell, C. Lobo, R. Marquilhas, D. Martín.** *IRONIC - Iron gall ink challenges: History and conservation of a disappearing cultural heritage.* Heritage Science and Technologies, París, 13-16/02/2019. Póster.

- **Raluca Fratila.** *Synthesis and functionalization of magnetic nanoparticles for biomedical applications.* Ciclo de conferencias del Dpto. De Química Orgánica de la Universidad del País Vasco. San Sebastián, 25/02/2019. Seminario invitado.
- **María Moros.** *Hipertermia en nanomedicina: Diagnóstico y tratamiento.* II Workshop en NanoOncología. Zaragoza, 2019. Charla invitada.
- **Laura Asín.** *Una salud de HIERRO con la nanomedicina.* Workshop en NanoOncología. Zaragoza, 2018. Charla invitada.
- **Yilian Fernández Afonso,** Osmany García Zaldívar, **Lucía Gutiérrez,** Yorexis González Alfaro, Francisco Calderón Piñar. *Obtención de compuestos de nanopartículas magnéticas y dióxido de silicio amorfo para la extracción de ADN.* 8ª Jornada de Jóvenes Investigadores (Química y Física) de Aragón. Zaragoza, 22/11/2018. Póster.
- **Lilianne Beola, Laura Asín, Raluca Fratila, Vanessa Herrero, Jesús Martínez de la Fuente, Valeria Grazu, Lucía Gutiérrez.** *Nanopartículas magnéticas para tratamiento de cáncer por hipertermia magnética en modelos celulares 3D.* 8ª Jornada de Jóvenes Investigadores (Química y Física) de Aragón. Zaragoza, 22/11/2018. Póster.
- **Isabel Franco Castillo, Scott G. Mitchell, Jesús Martínez de la Fuente.** *Nanopartículas para preservación del Patrimonio Cultural.* 8ª Jornada de Jóvenes Investigadores (Química y Física) de Aragón. Zaragoza, 22/11/2018. Charla oral.
- **Regina Pamplona, Carlos Sánchez-Somolinos, Rafael Martín-Rapún.** *Funcionalización de hidrogeles para aplicaciones biomédicas.* 8ª Jornada de Jóvenes Investigadores (Química y Física) de Aragón. Zaragoza, 22/11/2018. Póster.
- **Eduardo Moreno.** *Funcionalización orientada de nanopartículas magnéticas con cadherina E.* 8ª Jornada de Jóvenes Investigadores (Química y Física) de Aragón. Zaragoza, 22/11/2018. Póster.
- **Sonia García-Embid,** Inés Serrano-Sevilla, Laura De Matteis, Ainhoa Lucía, José Antonio Aínsa, **Jesús Martínez de la Fuente.** *Nanoemulsion-based chitosan nanocapsules as efficient delivery system for bedaquiline antibiotic.* 8ª Jornada de Jóvenes Investigadores (Química y Física) de Aragón. Zaragoza, 22/11/2018. Póster.
- **Rafael Ramírez Jiménez,** Erica Quagliarini, **Francesca Bussolari, Laura Asín, Rafael Martín-Rapún,** Luca Gentilucci, **Jesús Martínez de la Fuente.** *Funcionalización de nanopartículas de oro con peptidomiméticos como posible terapia para la esclerosis múltiple.* 8ª Jornada de Jóvenes Investigadores (Química y Física) de Aragón. Zaragoza, 22/11/2018. Póster.
- **Alba Martín Barreiro.** *Nanoprismas de oro como transductores para el desarrollo de biosensores fototérmicos plasmónicos.* 8ª Jornada de Jóvenes Investigadores (Química y Física) de Aragón. Zaragoza, 22/11/2018. Póster.
- **Héctor Soria-Carrera,** Ainhoa Lucía, Laura De Matteis, José A. Aínsa, **Jesús Martínez de la Fuente, Rafael Martín-Rapún.** *Micelas polipeptídicas recubiertas con alginato para encapsulación de bedaquilina.* 8ª Jornada de Jóvenes Investigadores (Química y Física) de Aragón. Zaragoza, 22/11/2018. Póster.
- **Álvaro Artiga,** Inés Serrano-Sevilla, Laura De Matteis, **Scott G. Mitchell, Carlos Sánchez-Somolinos, Jesús Martínez de la Fuente.** *Encapsulación de nanopartículas de oro en hidrogeles de quitosano mediante*

tecnología inkjet con adherencia a cultivos células. 8ª Jornada de Jóvenes Investigadores (Química y Física) de Aragón. Zaragoza, 22/11/2018. Póster.

- **Beatriz Martín-Gracia**, Inés Bolsa, **Jesús Martínez de la Fuente**, **Valeria Grazú**, **María Moros**. *Exosomes as tumoral biomarkers: devising an efficient and economical purification strategy based on magnetic immunoconjugates*. 8ª Jornada de Jóvenes Investigadores (Química y Física) de Aragón. Zaragoza, 22/11/2018. Póster.
- **Javier Idiago-López**, **Eduardo Moreno-Antolín**, **Jesús Martínez de la Fuente**, **Valeria Grazú**, **Raluca M. Fratila**. *Química click bioortogonal e hipertermia magnética: una nueva estrategia para la transfección celular*. 8ª Jornada de Jóvenes Investigadores (Química y Física) de Aragón. Zaragoza, 22/11/2018. Comunicación oral.
- **Raluca Maria Fratila**. *Química bioortogonal en Nanotecnología – desafíos y oportunidades*. Congreso Iberoamericano: 85 Años Sociedad Química del Perú, XXIX congreso peruano de química. Lima, 16-19/10/2018. Charla plenaria.
- **Jesús Martínez de la Fuente**. *Designing hybrid nanoparticles for therapy and diagnosis*. IPAP 2018. Salamanca, 24-28/09/2018. Charla invitada.
- **Héctor Soria Carrera**, Ainhoa Lucía, Laura De Matteis, José A. Aínsa, **Jesús Martínez de la Fuente**, **Rafael Martín-Rapún**. *Polysaccharide-coated polypeptidic micelles for drug delivery*. International Conference on Self-Assembly of Colloidal Systems (SACS'18). Burdeos, 20-22/09/2018. Comunicación oral.
- **Rafael Ramírez-Jiménez**, **Rafael Martín-Rapún**, **Jesús Martínez de la Fuente**. *CTAB-free selective precipitation of gold nanoprisms in the presence of gold nanospheres*. 2018 European Materials Research Society Fall Meeting (2018 E-MRS Fall Meeting). Varsovia, 17-20/09/2018. Charla oral.
- **Isabel Franco Castillo**, C. González, S. Eyssautier, A. Misra, C. Streb, **Scott G. Mitchel**. *Molecular and hybrid nanomaterials for the prevention of biodeterioration of cultural heritage objects*. IBBS 2018 New Trends in Cultural Heritage Biodeterioration. Coimbra, 5-7/09/2018. Comunicación oral.
- A. García, N. Santamaría, **Sonia García-Embid**, Laura De Matteis, **Lucía Gutiérrez**, **Jesús Martínez de la Fuente**, SP. Pereira, P. Acedo. *Developing novel drug nanocarriers to improve pancreatic cancer outcomes*. British Society for Nanomedicine 2018, Annual Early Career researcher meeting. Londres, 6-7/08/2018. Charla oral.
- **Scott Mitchell**. *Polyoxometalate ionic liquids as biodeterioration prevention agents for the cultural heritage field*. International Symposium on Metal-Oxo Cluster Sciences. Tokyo, 4-8/08/2018. Charla invitada.
- **Scott Mitchell**. *Inkjet printing of hybrid nanocontainers*. 43rd International Conference on Coordination Chemistry. Sendai, 29/07-03/08/2018. Charla invitada.
- **Javier Idiago-López**, **Lilianne Beola**, Helena Gavilán, **Raluca Maria Fratila**, **Jesús Martínez de la Fuente**, María del Puerto Morales, **Lucía Gutiérrez**. *Degradation study of magnetite nanoflowers for hyperthermia treatments*. 3rd International Conference of Polyol Mediated Synthesis. Madrid, 25-27/06/2018. Póster.
- **Lilianne Beola**, **Javier Idiago**, Helena Gavilán, **Laura Asín**, **Valeria Grazú**, María del Puerto Morales, **Lucía Gutiérrez**. *Aggregation study of magnetite nanoflowers for biomedical applications*. 3rd International Conference of Polyol Mediated Synthesis. Madrid, 25-27/06/2018. Póster.

- **Jesús Martínez de la Fuente.** *Hybrid nanoparticles for therapy and diagnosis: Au Nanoprisms for gastrointestinal cancer.* RiminiPeptides 2018. Rimini, 16-18/06/2018. Keynote.
- **Álvaro Artiga, Sonia García-Embid, Inés Serrano-Sevilla, Laura De Matteis, Scott G. Mitchell, Carlos Sánchez-Somolinos, Jesús Martínez de la Fuente.** *Inkjet printed encapsulation of gold nanoparticles inside cell-adhesive chitosan hydrogels.* NanoBIOSOMA. Madrid, 12-13/07/2018. Charla oral.
- **María Moros.** *Effect of surface chemistry and associated protein corona on the long-term biodegradation of iron oxide nanoparticles in vivo.* Research Network EU-Japan Workshop 2018. Zaragoza, 29/06/2018. Charla invitada.
- **Javier Idiago-López, Eduardo Moreno Antolín, Jesús Martínez de la Fuente, Valeria Grazú, Raluca Maria Fratila.** *Bioorthogonal labelling of cells with magnetic nanoparticles.* Research network Europe-Japan – workshop and meeting 2018. Zaragoza, 29/06/2018. Charla invitada.
- **Eduardo Moreno Antolín, Raluca María Fratila, Jesús Martínez de la Fuente, Valeria Grazú.** *Oriented functionalization of magnetic nanoparticles with cadherin.* Research network Europe-Japan – workshop and meeting 2018. Zaragoza, 29/06/2018. Charla invitada.
- **Lilianne Beola.** *Differences in cell death mechanism after magnetic hyperthermia treatment depending on the nanoparticle location.* Research network Europe-Japan – workshop and meeting 2018. Zaragoza, 29/06/2018. Charla invitada.
- **Valeria Grazú, Jesús Martínez de la Fuente.** *Short, long term fate and biodegradation of IONPs in vivo.* Nanotech France 2018. París, 26-29/06/2018. Charla invitada.
- **David García, Rebeca Amaro, Lucía Gutierrez, Fernando Herranz, Gorka Salas.** *Synthesis of ferrite nanoparticles for biomedical applications.* 8th Early Stage Researchers Workshop in Nanoscience. Madrid, 13-14/06/2018. Póster.
- **María Moros, Francesca di María, Pía Dadano, M. Zangoli, Giada Onorato, Antonella Bauduin, Angela Tino, L. di Stefano, G Barbarella, Claudia Tortiglione.** *Bioengineering Fluorescent conductive microfibrils in Vivo.* CIMTEC Forum on New Materials. Perugia, 10-14/06/2018. Charla invitada.
- **María Moros, M.R. Antognazza, C. Bossio, Giada Onorato, Antonella Bauduin, Valentina Marchesano, M. Zangoli, Angela Tino, Guglielmo Lanzani, Claudia Tortiglione.** *Photostimulation of semiconducting nanoparticles to control physiological functions in vivo.* CIMTEC Forum on New Materials Perugia, 10-14/06/2018. Charla oral.
- **Jesús Martínez de la Fuente.** *Heat Effect of Nanoparticles for Biotechnological Applications.* CIMTEC Forum on New Materials. Perugia, 10-14/06/2018. Charla invitada.
- **Lilianne Beola, Laura Asín, Raluca Maria Fratila, Jesús Martínez de la Fuente, Valeria Grazú, Lucía Gutiérrez.** *Magnetic nanoparticles for cancer treatment, evaluating the effect in 3D cell culture models.* 1st SBAN Conference (Spanish Conference on Biomedical Applications of Nanomaterials). Madrid, 07-08/06/2018. Charla oral.
- **David García-Soriano, Rebeca Amaro, Lucía Gutiérrez, Gorka Salas.** *Doped nano-ferrites for cancer therapy and diagnosis.* 1st SBAN Conference (Spanish Conference on Biomedical Applications of Nanomaterials). Madrid, 7-8/06/2018. Comunicación oral.

- **Héctor Soria-Carrera**, Ainhoa Lucía, **Jesús Martínez de la Fuente**, **Rafael Martín-Rapún**. *Automated fabrication of polypeptide micelles as carriers for hydrophobic drugs*. Bordeaux Polymer Conference. Burdeos, 28-31/05/2018. Charla oral.
- Sonali Correa, Teresa Sierra, **Laura Asín**, **Lucía Gutiérrez**, **Jesús Martínez de la Fuente**, Lorena Betancor, **Valeria Grazú**. *Nanobiohybrids for the thermoactivation of a therapeutic enzyme by magnetic hyperthermia*. 12th International Conference on the Scientific and Clinical Applications of Magnetic Carriers. Copenhagen, 22-26/05/2018. Charla oral.
- David García, Rebeca Amaro, **Lucía Gutiérrez**, Fernando Herranz, Gorka Salas. *Synthesis of metal-oxide nanoparticles for biomedical applications*. 12th International Conference on the Scientific and Clinical Applications of Magnetic Carriers. Copenhagen, 22-26/05/2018. Póster.
- **Raluca María Fratila**, Marcos Navascuez, **Javier Idiago-López**, **Eduardo Moreno Antolín**, Maite Eceiza, **Jesús Martínez de la Fuente**, **Lucía Gutiérrez**, **Valeria Grazú**. *Clickable magnetic nanoparticles; a new tool for magnetic hyperthermia*. 12th International Conference on the Scientific and Clinical Applications of Magnetic Carriers. Copenhagen, 22-26/05/2018. Charla oral.
- **Lilianne Beola**, **Laura Asín**, **Raluca M. Fratila**, **Vanessa Herrero**, **Jesús M de la Fuente**, **Lucía Gutiérrez**, **Valeria Grazú**. *Differences in cell death mechanism after magnetic hyperthermia treatment depending on the nanoparticle location*. 12th International Conference on the Scientific and Clinical Applications of Magnetic Carriers. Copenhagen, 22-26/05/2018. Charla oral.
- Helena Gavilán, Eva Mazarío, Ana Espinosa, **Lucía Gutiérrez**, Sabino Veintemillas-Verdaguer; María del Puerto Morales. *Assembling magnetic iron oxide cores to produce well-controlled hydrophilic multicore structures*. 12th International Conference on the Scientific and Clinical Applications of Magnetic Carriers. Copenhagen, 22-26/05/2018. Charla plenaria.
- **Laura Asín**, **Lilianne Beola**, **Lucía Gutiérrez**, Grazyna Stepień, **Raluca M. Fratila**, E. Guisasola, A. Baeza, M. Vallet-Regí, **Valeria Grazú**, **Jesús Martínez de la Fuente**. *Antitumoral effect of in vivo Magnetic Hyperthermia*. 12th International Conference on the Scientific and Clinical Applications of Magnetic Carriers. Copenhagen, 22-26/05/2018. Póster.
- **Laura Asín**, **Lilianne Beola**, **Valeria Grazú**, **Lucía Gutiérrez**. *A roadmap to the standardization of in vivo magnetic hyperthermia*. 12th International Conference on the Scientific and Clinical Applications of Magnetic Carriers. Copenhagen, 22-26/05/2018. Póster.
- **Javier Idiago-López**, **Vanessa Herrero**, **Raluca María Fratila**, **Jesús Martínez de la Fuente**. *Nucleic acid-functionalized iron oxide nanoparticles for controlled drug release using magnetic hyperthermia*. 12th International Conference on the Scientific and Clinical Applications of Magnetic Carriers. Copenhagen, 22-26/05/2018. Póster.
- Helena Gavilán, David García, J. Pellico, F. Herranz, Gorka Salas, Francisco Javier Lázaro, Sabino Veintemillas-Verdaguer, María del Puerto Morales, **Lucía Gutiérrez**. *Transformations of nanoparticles composition, size and aggregation followed by AC susceptibility*. 12th International Conference on the Scientific and Clinical Applications of Magnetic Carriers. Copenhagen, 22-26/05/2018. Póster.
- **María Moros**, Grazyna Stepień, Marta Pérez-Hernández, **Lucía Gutiérrez**, **Raluca María Fratila**, Julián Pardo, **Jesús Martínez de la Fuente**. *Effect of surface chemistry and associated protein corona on the long-term*

biodegradation of iron oxide nanoparticles in vivo. 12th International Conference on the Scientific and Clinical Applications of Magnetic Carriers. Copenhagen, 22-26/05/2018. Póster.

- **Eduardo Moreno Antolín, Beatriz Martín Gracia, Jesús Martínez de la Fuente, Raluca Fratila, Valeria Grazú.** *Oriented functionalization of magnetic nanoparticles with cadherins*. 12th International Conference on the Scientific and Clinical Applications of Magnetic Carriers. Copenhagen, 22-26/05/2018. Póster.
- **María Moros.** *Protein corona of NBMs*. 1st BIORIMA Training School. Venecia. 16-20/05/2018. Charla invitada.
- Helena Gavilán, Elena Hernández-Sánchez, **Laura Asín**, María Eugenia Brollo, Carlos J. Serna, Sabino Veintemillas-Verdaguer, **Lucía Gutiérrez**, María del Puerto Morales. *Magnetite nanoparticles assembled in flower-like structures with tunable magnetic properties from superparamagnetic to ferrimagnetic*. Intermag. Dublín, 24-28/04/2018. Póster.
- Lydia Horndler, **Lilianne Beola, Lucía Gutiérrez, Laura Asín.** *Hipertermia magnética en diferentes sistemas biológicos para terapia antitumoral*. Jornadas de jóvenes investigadores en cerámica y vidrio. Zaragoza, 20/03/2018. Póster.
- Sonali Correa, **Laura Asín, Jesús Martínez de la Fuente, Valeria Grazú**, Lorena Betancor. *Estrategias de síntesis de nanohíbridos de sílica biomimética: co-encapsulación de peroxidasa y nanopartículas magnéticas*. Primer Encuentro de Jóvenes Investigadores en Ciencias de Materiales. Montevideo (Uruguay), 13-14/04/2018. Charla oral.
- **Raluca Fratila.** *Bioorthogonal chemistry - a new approach for sublethal magnetic hyperthermia using iron oxide nanoparticles*. COST – RADIOMAG Annual Action Progress Conference & MC meeting. Timisoara (Rumanía), 22-23/03/2018. Charla oral.
- **Lilianne Beola, Lucía Gutiérrez, Jesús Martínez de la Fuente, Valeria Grazú, Laura Asín.** *Studying the efficacy of magnetic nanoparticles for hyperthermia treatment in three dimensional cell culture*. I Jornada de jóvenes investigadores en cerámica y vidrio. Zaragoza, 20/03/2018. Charla oral.
- **Javier Idiago-López, Eduardo Moreno, Raluca Maria Fratila, Jesús Martínez de la Fuente.** *Magnetic nanoparticles covalently immobilized on cell surfaces for localized magnetic hyperthermia*. I Jornada de Jóvenes Investigadores de cerámica y vidrio en el ICMA. Zaragoza, 20/03/2018. Charla oral.
- **Lucía Gutiérrez.** *Magnetic nanoparticles for biomedical applications: synthesis, aggregation and biotransformations*. American Physical Society Meeting 2018. Los Ángeles, 5-9/03/2018. Charla invitada.
- **Lilianne Beola, Lucía Gutiérrez, Jesús Martínez de la Fuente, Valeria Grazú, Laura Asín.** *In vitro efficacy of magnetic hyperthermia in 3D cell culture in collagen gel matrix models*. IV Reunión de Jóvenes Investigadores en Coloides e Interfases (JICI IV). Córdoba, 7-9/02/2018. Charla oral.
- Álvaro Artiga, Inés Serrano-Sevilla, Laura De Matteis, **Scott G. Mitchell, Carlos Sánchez-Somolinos, Jesús Martínez de la Fuente.** *Inkjet printing: a novel technology for gold*. IV Reunión de Jóvenes Investigadores en Coloides e Interfases (JICI IV). Córdoba, 7-9/02/2018. Charla oral.
- Helena Gavilán, María del Puerto Morales, **Lucía Gutiérrez.** *Single-core and multi-core magnetic nanoparticles for biomedical applications*. IV Reunión de Jóvenes Investigadores en Coloides e Interfases (JICI IV). Córdoba, 7-9/02/2018. Charla invitada.
- **Jesús Martínez de la Fuente.** *Taller sobre carrera científica*. IV Reunión de Jóvenes Investigadores en Coloides e Interfases (JICI IV). Córdoba, 7-9/02/2018. Taller.

- **Scott G. Mitchell.** *Preventing biodeterioration with nanostructured materials.* III Congreso de Materiales para Retos de la Sociedad. Jaca, 5-7/02/2018. Charla invitada.
- **Scott G. Mitchell.** *Nanomaterials for biomedical applications.* Transfiere, 7º Foro Europeo para la Ciencia, Tecnología e Innovación. Málaga, 14-15/02/2018. Charla invitada.
- **María Moros.** *Hydra: an evolutionarily conserved model system for testing new materials.* III Congreso de Materiales para Retos de la Sociedad. Jaca, 5-7/02/2018. Charla invitada
- **Valeria Grazú.** *Biofunctionalized nanoparticles: Technology transfer opportunities and new biotechnological applications.* III Congreso de Materiales para Retos de la Sociedad. Jaca, 5-7/02/2018. Charla invitada.
- **Laura Asín.** *Antitumoral effect in vivo magnetic hyperthermia treatment.* III Congreso de Materiales para Retos de la Sociedad. Jaca, 5-7/02/2018. Charla invitada.
- **Eduardo Moreno Antolín.** *Attaching nanoparticles to the cell membrane through bioorthogonal click chemistry.* III Congreso de Materiales para Retos de la Sociedad. Jaca, 5-7/02/2018. Charla oral.
- **Javier Idiago-López, Eduardo Moreno Antolín, Raluca M. Fratila, Jesús Martínez de la Fuente.** *Bioorthogonal click chemistry meets nanotechnology: covalent immobilization of magnetic nanoparticles on cell membranes.* IV Reunión de Jóvenes Investigadores en Coloides e Interfases (JICI IV). Córdoba, 7-9/02/2018. Charla oral.
- **Laura Asín.** *Nanomaterials for biomedical applications.* NanoSafety Cluster Scientific Meeting 2018. Atenas, 22-23/03/2018. Charla oral.
- **Scott G. Mitchell.** *Nanomateriales antimicrobianos para prevenir el biodeterioro en objetos del patrimonio cultural.* XIV JORNADAS TÉCNICAS NANOMATERIALES APLICADOS EN CONSERVACIÓN Y RESTAURACION DE BIENES CULTURALES. Huesca, 10-11/05/2018. Charla invitada.
- **Jesús Martínez de la Fuente.** *Entrepreneurship: Taking Nanotechnology Research from Bench to the Market.* BioNanoMed 2018. Graz, 25-27/05/2018. Charla invitada.
- **María Moros.** *Biodistribution of Nanoparticles in biological systems.* BIOMaterial Risk Management Training School (BIORIMA). Venecia, 2018. Seminario invitado.
- Grazyna Stepien, **María Moros, Lucía Gutiérrez, Raluca M. Fratila, Julián Pardo, Jesús Martínez de la Fuente.** *Short, long term fate and biodegradation of IONPs in vivo.* SPIE BiOS 2018. 27/01-2/02/2018. San Francisco, 2018. Charla invitada.
- **María Moros.** *Nanopartículas en Nanomedicina: ¿es oro todo lo que reluce?* Workshop en NanoOncología, Universidad de Zaragoza. Zaragoza, 16/01/2018. Charla invitada.

PATENTES

- J. Cejudo, L. Trobo, J. Rocha, J.M. Guisán, J. García Ovejero, M.P. Morales, **F. Bussolari, I. Armenia, J. M. de la Fuente, V. Grazú**, F. López. Hybrid composite for tuning local nanoactuation over enzyme activity, without tuning MNP anisotropy. EP23382002.6. 2023.
- **J. Martínez de la Fuente, C. Cuestas-Ayllón, V. Grazú**, C. Fernández, M. Gutiérrez, A. Baldi, R. Eritja, P. Marco, M.L. Vilaplana, A. Aviñó, C. Ciudad, V. Noé. Polypurine reverse hoogsteen hairpins and parallel clamps and their use as biosensors. EP21382818. CSIC, UB, CIBER, M.P. 2021.
- J. García Ovejero, **I. Armenia**, S. Veintemillas, **J. M. de la Fuente**, P. Morales, **V. Grazú**, J. M. Guisán, F. López, B. Nidetzky, D. Röther, N. Cassinelli, G. Bernardini. Nanoparticles for the control of one-spot multienzymatic reactions. EP21382585.4. 2021. Extendida a PCT en 2022 PCT/EP2022/068190.
- **C. Sánchez Somolinos**; I. Ochoa Garrido; L. J. Fernández Ledesma; M. Doblaré. Válvula microfluidica, procedimiento de fabricación y usos de la misma. P202030624. 2020.

TESIS DOCTORALES

- Caracterización de nanopartículas magnéticas para la optimización del tratamiento de cáncer por hipertermia magnética y óptica.
Doctorando: Yilian Fernández Afonso
Directores: Dra. Lucía Gutiérrez Marruedo
Universidad de Zaragoza. Fecha de defensa: 07/02/2023
- Unión covalente de nanopartículas magnéticas a membranas celulares para la modulación de sus propiedades biofísicas con hipertermia localizada.
Doctorando: Fco. Javier Idiago López
Directores: Dr. Jesús Martínez de la Fuente y Dra. Raluca Fratila
Universidad de Zaragoza y CSIC. Fecha de defensa: 15/12/2022
- Preventing biodeterioration of cultural heritage using nanostructured materials.
Doctorando: Isabel Franco Castillo
Directores: Dr. Jesús Martínez de la Fuente y Dr. Scott Mitchell
Universidad de Zaragoza y CSIC. Fecha de defensa: 07/10/2022.
- Polypeptide-based materials for antimicrobial applications.
Doctorando: Héctor Soria Carrera

Directores: Dr. Rafael Martín Rapún y Dr. Jesús Martínez de la Fuente
Universidad de Zaragoza y CSIC. Fecha de defensa: 30/09/2022.

- Desarrollo de un nuevo biosensor de flujo lateral plasmónico para la detección ultrasensible de vesículas extracelulares de cáncer de próstata. exosomas.
Doctorando: Beatriz Martín Gracia
Directores: Dra. María Moros y Dra. Valeria Grazú Bonavia
Universidad de Zaragoza y CSIC. Fecha de la defensa: 08/07/2022
- Modificación superficial de nanopartículas de oro para aplicaciones biotecnológicas.
Doctorando: Rafael Ramírez Jiménez
Directores: Dr. Jesús Martínez de la Fuente y Dr. Rafael Martín Rapún
Universidad de Zaragoza y CSIC. Fecha de defensa: 20/04/2022
- Encapsulation of biologically active agents in emulsions stabilizes by natural polymers.
Doctorando: Sonia García Embid
Directores: Dr. Jesús Martínez de la Fuente y Dra. Laura De Matteis
Universidad de Zaragoza y CSIC. Fecha de defensa: 11/03/2022
- Modelos de membranas celulares y su interacción con nanopartículas magnéticas.
Doctorando: Silvia Ruiz Rincón
Directores: Dr. Jesús Martínez de la Fuente y Dra. Pilar Cea
Universidad de Zaragoza y CSIC. Fecha de defensa: 10/09/2021
- Desarrollo de nanobiosensores ópticos enzimáticos e inmunológicos basados en nanomateriales de oro para la determinación de sustancias de interés biomédico.
Doctorando: Alba Martín Barreiro
Directores: Dra. Susana de Marcos y Dra. Valeria Grazú
Universidad de Zaragoza y CSIC. Fecha de defensa: 18/12/2020
- Gold nanoparticles and chitosan encapsulation for therapy and sensing.
Doctorando: Álvaro Artiga Folch
Directores: Dr. Jesús Martínez de la Fuente y Dr. Scott Mitchell
Universidad de Zaragoza y CSIC. Fecha de defensa: 17/12/2020

- Desarrollo de nanocápsulas polisacáridas para el transporte de agentes terapéuticos y estudio de sus interacciones con sistemas biológicos.
Doctorando: Inés Serrano Sevilla
Directores: Dr. Jesús Martínez de la Fuente y Dra. Laura De Matteis
Universidad de Zaragoza y CSIC. Defense date: 07/10/2020

- Hipertermia magnética basada en nanopartículas de óxido de hierro como terapia antitumoral: del cultivo celular tridimensional al modelo in vivo.
Doctorando: Lilianne Beola
Directores: Dra. Lucía Gutiérrez, Dra. Laura Asín, Dra. Valeria Grazú
Universidad de Zaragoza and CSIC. Fecha de defensa: 18/09/2020

- Digital fabrication of optical elements through inkjet printing of direct photocurable hybrid inks.
Doctorando: Jorge Alamán Aguilar
Directores: Dr. Carlos Sánchez Somolinos
Universidad de Zaragoza and CSIC. Fecha de defensa: 23/07/2020

- Anisotropic gold nanoprobos and their applications in therapy and biosensing.
Doctorando: Gabriel Alfranca Ramón
Directores: Dr. Jesús Martínez de la Fuente y Dr. Daxiang Cui
Universidad de Zaragoza y Universidad Jiao Tong de Shanghai. Fecha de defensa: 06/03/2020

- Multifuncionalización de nanopartículas magnéticas por reconocimiento molecular de ácidos nucleicos y péptidonucleicos para la liberación controlada mediante hipertermia.
Doctorando: Vanessa Herrero
Directores: Dr. Jesús Martínez de la Fuente y Dra. Raluca Fratila
CSIC-Universidad de Zaragoza. Fecha de defensa: 07/09/2018

Tesis doctorales en realización

2022-hoy Nanoterapias para enfermedades neurológicas
Doctorando: Natalia Esteban Pérez
Directores: Dr. Jesús Martínez de la Fuente
Universidad de Zaragoza y CSIC

- 2022-hoy Desarrollo de sensores enzimáticos activados por temperatura
Doctorando: Antonio Luna Pozo
Directores: Dr. Jesús Martínez de la Fuente
Universidad de Zaragoza y CSIC
- 2022-hoy Herramientas basadas en nanotecnología para la regeneración de nervios
Doctorando: Marina García Bejarano
Directores: Dr. Jesús Martínez de la Fuente
Universidad de Zaragoza y CSIC
- 2021-hoy Hipertermia magnética como potenciador de la inmunidad antitumoral.
Doctorando: Maura Rábade Chediak
Directores: Dra. Lucía Gutiérrez Marruedo, Valeria Grazú Bonavia y Laura Asín Pardo.
Universidad de Zaragoza and CSIC
- 2021-hoy Estimulación magnetomecánica para el aumento de regeneración tisular.
Doctorando: Giuseppina Tommasini
Directores: Dra. María Moros Caballero
Universidad de Zaragoza and CSIC
- 2020-hoy Impresión digital de elastómeros cristal líquido para dispositivos biomédicos.
Doctorando: Lorena Montesino
Directores: Dr. Carlos Sánchez Somolinos
Universidad de Zaragoza and CSIC
- 2020-today 4D printing of photoresponsive materials for soft robotics and biomedical applications.
Doctorando: Lorena Ceamanos
Directores: Dr. Carlos Sánchez Somolinos
Universidad de Zaragoza and CSIC
- 2020-hoy Funcionalización de nanopartículas magnéticas con cadherinas como activadores de vías intracelulares.
Doctorando: Christian Castro

Directores: Dra. María Moros Caballero
Universidad de Zaragoza y CSIC

2020-hoy Control remoto de vías intracelulares mediante nanopartículas magnéticas.

Doctorando: Pilar Gomollón

Directores: Dra. María Moros Caballero

Universidad de Zaragoza y CSIC

2019-hoy Nanopartículas híbridas activadas remotamente por calentamiento magnético para terapia enzimática dirigida contra el cáncer.

Doctorando: Beatriz Torres Herrero

Directores: Dra. Valeria Grazú

Universidad de Zaragoza y CSIC

2019-hoy Biocatálisis termoactivada por nanoactuación.

Doctorando: Francesca Bussolari

Directores: Dr. Jesús Martínez de la Fuente y Dra. Valeria Grazú

Universidad de Zaragoza y CSIC

2018-hoy New structured platforms for mechanobiological studies.

Doctorando: Sandra González Lana

Directores: Dr. Carlos Sánchez Somolinos y Dr. Iñaki Ochoa

Universidad de Zaragoza y CSIC

2018-hoy Study of the interaction between nanocarriers and in vitro models for the administration of drugs across biological membranes.

Doctorando: Maria Alleva

Directores: Dr. Rafael Martín Rapún y Dra. María Moros

Universidad de Zaragoza y CSIC

2018-hoy Funcionalización de hidrogeles para aplicaciones biomédicas.

Doctorando: Regina Pamplona Curiel

Directores: Dr. Rafael Martín Rapún y Dr. Carlos Sánchez Somolinos

Universidad de Zaragoza y CSIC

