



IBERSENSOR 2022

PROGRAM

Monday, September 5th

- 9:00-12:30** **Registration**
- 12:30-14:20** **Lunch** – University of Aveiro red room of Santiago dining Hall
- 14:20-15:00** **Opening ceremony** – *Welcome addresses by Presidents of Committees, by the Vice-rector of University of Aveiro (UA), by the Director of the CESAM, and by the President of the Center Region of “Ordem dos Engenheiros”.*
- 15:00-16:00** Plenary: **Implantable neural probes.** *José Higinio Correia, University of Minho, Portugal*
- 16:00-16:30** **Coffee-break**
- 16:30** Oral sessions: **Electrochemical sensors**
Chair: *Cecília Jiménez-Jorquera, Instituto de Microelectrónica de Barcelona (IMB-CNM), CSIC, ES*
- 16:30-16:50** **O1** Electrochemical nano-immunosensor based on cerium oxide-doped PEDOT nanocomposite for the detection of anti-p53 autoantibodies. *A.F. Cruz-Pacheco et al.*
- 16:50-17:10** **O2** Sensing ferrocene derivatives using a modified glassy carbon electrode with a PEDOT/carbon microspheres thin-film. *N. Vergara Del Toro et al.*
- 17:10-17:30** **O3** Modified ISFETS with silk fibroin membrane for pH measurements in biological matrices. *A.M. Diaz et al.*
- 17:30-17:50** **O4** Lignosulfonate-based polyurethanes doped with carbon nanotubes towards sensor applications. *S. Magina et al.*
- 17:50-18:10** **O5** Microelectrode sensors for corrosion studies. *A.C. Bastos et al.*

Tuesday, September 6th

- 9:00-10:00** Plenary: **Recent developments in nanostructured electrochemical sensor and biosensor platforms and applications.** *Christopher Brett, University of Coimbra, Portugal*
- 10:00** Oral sessions: **Design and technology of sensors + MEMS**
Chair: *Manuela Vieira, Instituto Superior de Engenharia de Lisboa (ISEL), PT*
- 10:00-10:20** **O19** CoNi and Ni-based barcodes toxicity for tagging and magnetic manipulation of HeLa cells. *M.I.Arjona et al.*
- 10:20-10:40** **O20** Photonic planar taper waveguide. *P. Lourenço et al.*
- 10:40-11:10** **Coffee-break**
- 11:10** Oral sessions: **Optical and photoacoustic sensors**
Chair: *Jahir Orozco Holguín, Universidad de Antioquia (UA), CO*
- 11:10-11:30** **O6** Biosensor based on polymer optical fiber and gold nanoparticle for rapid detection of *Escherichia coli*. *R.C.S.B. Allil et al.*
- 11:30-11:50** **O7** Colorimetric based test-strips with virus-like particles as a recognition layer for sars-cov-2 virus. *M.P. Sousa et al.*
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11:50-12:10	O8 Single and cascaded long period fiber grating coated with a polydimethylsiloxane sensing film for acetone detection. <i>G. Beltrán-Pérez et al.</i>
12:10-12:30	O9 Fe ₃ O ₄ -coated plastic optical fiber for H ₂ S sensing. <i>J.D. Lopez et al.</i>
12:30-14:20	Lunch - University of Aveiro red room of Santiago dining Hall
14:20-16:00	Poster Session. <i>Atrium of CCCI Auditorium</i>
16:00-16:30	Coffee-break
16:30	Oral sessions: <i>Applications to biomedicine and health</i> Chair: <i>Julián Alonso-Chamarro, Grup de Sensors i Biosensors, Universitat Autònoma de Barcelona, ES</i>
16:30-16:50	O31 Biosensing strategies for exosomes. <i>M. Bernuz et al.</i>
16:50-17:10	O32 Simultaneous quantitative analysis of several electrolytes in sweat samples using a flow system and potentiometric devices. <i>M. Rovira et al.</i>
17:10-17:30	O33 Impedimetric and capacitive biosensing of β -1,4-galactosyltransferase-v colon cancer biomarker. <i>D. Echeverri et al.</i>
17:30-17:50	O34 Disposable biomedical devices for at-home monitoring of different metabolic diseases. <i>B. Rebollo-Calderon et al.</i>
17:50-18:10	O35 Surface modification of gallium nanoparticles and their interaction with human serum albumin. <i>N.V. Falcón-Cruz et al.</i>
18:10-19:10	Permanent Committee Meeting

Wednesday, September 7th

9:00-10:00	<u>Plenary</u> : Chemical Sensors and “real” Analytical Chemistry. <i>Tony Edmonds, London Imperial College (retired), England</i>
10:00	Oral sessions: <i>Analytical integrated microsystems and Lab-on-a-chip (LOC)</i> Chair: <i>Manel del Valle, Universitat Autònoma de Barcelona (UAB), ES</i>
10:00-10:20	O22 Microreactors in protein pegylation: towards higher yields and specificity. <i>J.H.P.M. Santos et al.</i>
10:20-10:40	O23 Functionalization of a fully integrated electrophotonic silicon circuit for sensing biomolecules. <i>O. Pérez-Díaz et al.</i>
10:40-11:10	Coffee-break
11:10	Oral sessions: <i>Applications to environment, agriculture and energy saving</i> Chair: <i>Mario Ricardo Gongora-Rubio, Instituto de Pesquisas Tecnológicas, BR</i>
11:10-11:30	O27 Plastic-optical-fiber-based solar tracker development applied for ambiences illumination. <i>A.S. Allil et al.</i>
11:30-11:50	O28 Aveiro steam city project: a good practice with urban air quality sensors network. <i>D. Graça et al.</i>
11:50-12:10	O29 Intercomparison between air quality microsensors and conventional monitoring data. <i>J. Reis et al.</i>
12:10-12:30	O30 Sistema para el monitoreo de la calidad del aire en la zona metropolitana de La Laguna. <i>H.C. Fuentes et al.</i>
12:30-14:20	Lunch - University of Aveiro red room of Santiago dining Hall.
14:20-18:00	Social afternoon - <i>Moliceiro trip followed by guided walking tour to “Arte Nova buildings” or guided tour in the “Museum of Aveiro”</i>
19:30-20:15	Cocktail reception with musical performance by <i>Beatriz Miranda e Vasco Miranda - Hotel Meliá-Ria</i>
20:15-23:30	Gala dinner – <i>Hotel Meliá-Ria</i>

Thursday, September 8th

- 9:00 Oral sessions: *New materials*
Chairman: *Carlos Domínguez Horna, Instituto de Microelectrónica de Barcelona (IMB-CNM), CSIC, ES*
- 9:00-9:20 **O13** Laser-induced graphene on polyimide and paper substrates for low-cost and flexible electrochemical biosensors. *N.F. Santos et al.*
- 9:20-9:40 **O14** Uv photodetector based on reduced graphene oxide and n-type Si heterojunction. *J.L. Perez Gordillo et al.*
- 9:40-10:00 **O15** Host-guest sensing system based on sulfonatocalixarene and pyranoflavylum dye for detection of food spoilage through biogenic amine capture. *A.S. Pires et al.*
- 10:00-10:20 **O16** Photosensitive nanopolymerosomes as electroactive species carriers: towards the development of biosensors. *J. Quinchia et al.*
- 10:20-10:40 **O17** Natural nanostructured materials as tuneable photonic sensing platforms. *J.W. Goessling et al.*
- 10:40-11:10 Coffee-break
- 11:10 Oral sessions: *New materials + Smart sensors and wireless networks*
Chair: *Idalia Ramos, Universidad de Puerto Rico en Humacao, PR*
- 11:10-11:30 **O18** Colorimetric assays for cardiovascular biomarkers detection using gold nanoparticles. *M. Antonio et al.*
- 11:30-11:50 **O24** Architecture of a bi-directional VLC system. *P. Louro et al.*
- 11:50-12:10 **O25** Intelligent split intersections using cooperative vehicle visibility communication. *M.A. Vieira et al.*
- 12:10-12:30 **O26** A visible light communication system to support indoor guidance. *M. Vieira et al.*
- 12:30-14:20 **Lunch** - University of Aveiro red room of Santiago dining Hall
- 14:20-14:20 Oral sessions: *Signal conditioning and instrumentation + Biosensors and applications to food analysis*
Chair: *José Antonio Rodríguez, Universidad de la Habana-Facultad de Física, CU*
- 14:20-14:40 **O21** Inexpensive corn starch-based supercapacitor for signal conditioning and detection. *F. Yuan et al.*
- 14:40-15:00 **O10** Colorimetric pyranoflavylum-containing sensor films for food spoilage monitoring. *V. Gomes et al.*
- 15:00-15:20 **O11** Determinação cinética de histamina usando uma sonda ratiométrica fotoluminescente combinando pontos quânticos de carbono e pontos quânticos ternários. *R.C. Castro et al.*
- 15:20-15:40 **O12** Development of an electrochemical aptasensor for the detection of a banned antimicrobial in milk. *V. Gaudin et al.*
- 15:40-16:10 **Closing ceremony** – *Conclusions and announcement of “Ibersensor 2024”.*



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