***CURRICULUM VITAE ABREVIADO (CVA)***

**Part A. PERSONAL INFORMATION**

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| --- | --- |
| First name  | Eloi |
| Family name | Ramon Garcia |  |  |
| Gender | Male | Birth date  | 01/08/1967 |
| ID number | 33940229A |  |  |
| e-mail | Eloi.ramon@imb-cnm.csic.es  | Web: <http://pueg.imb-cnm.csic.es/>  |
| Open Researcher and Contributor ID (ORCID) | 0000-0001-9974-8112 |

**A.1. Current position**

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| --- | --- |
| Position | Investigador Doctor FC laboral fijo |
| Initial date | 01/06/2015  |
| Institution | Consejo Superior de Investigaciones Científicas (CSIC)  |
| Department/Center | ICAS / IMB-CNM |
| Country | Spain  | Teleph. num | 93-594 7700 |
| Key words | Printed electronics; Thin Organic & Large Area Electronics (TOLAE); microelectronic IC design. |

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| --- | --- |
| Position | Profesor asociado A3 |
| Initial date | 15/02/1999 |
| Institution | Universitat Autònoma de Barcelona (UAB)  |
| Department/Center | Departament d'Enginyeria Electrònica |
| Country | Spain  | Teleph. num | 93-581 3183 |

**A.2. Previous positions**

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| Period | Position/Institution |
| 2014-2015 | Researcher – D+T Microelectrónica AIE |
| 2006-2014 | Técnico Superior de Apoyo a la Investigación (TSSR) - UAB |

**A.3. Education**

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| --- | --- | --- |
| PhD, Licensed, Graduate | University/Country | Year |
| PhD in Microelectronics and Electronic Systems | Universitat Autònoma de Barcelona (UAB) | 2014 |
| Master in Micro and Nanoelectronic Engineering | Universitat Autònoma de Barcelona (UAB) | 2009 |
| Ingeniero Superior de Telecomunicaciones | Universitat Politècnica de Catalunya (UPC) | 1997 |

**Part B. CV SUMMARY**

*Dr. Eloi Ramon graduated in Telecommunications Engineering from the Polytechnic University of Catalonia (UPC) in 1997, holds a Master in Micro- and Nanoelectronics Engineering (UAB) and a PhD thesis in Microelectronics and Electronic Systems (UAB) entitled “Inkjet Printed Microelectronic Devices and Circuits”.*

*In 1996 I joined as an Assistant Professor in Digital Systems at the Electronic Engineering Department at UPC. Since 1999, I am an Assistant Professor at the Electronic Department of the Autonomous University of Barcelona (UAB) where I am teaching Telecom and CS BsC and MA of Telecom Engineering.*

***In 2004****, I joined the Laboratory for HW-SW Prototypes & Solutions (CEPHIS-UAB, later CAIAC) as a researcher first, and later as a project and quality manager. In this early period, I worked intensively on technology transfer (27 projects and contracts) in embedded systems for data processing and Sensor Networks (WSN) with the participation in 4 spin-offs.*

***In 2009****, as a second part of my professional career, I start leading a new research line focused on the additive manufacturing of electronic devices such as solvent-based organic thin film transistors (OTFT) on flexible substrates. Since then, I have laid the foundations of the group as co-IP in the EU-FP7 CSA (FlexNet) and the FP7-RIA (TDK4PE) projects among others. UAB led TDK4PE and I co-lead the development of the fabrication technology. Taking advantage of the push of these new activities, I restarted my scientific career with a new PhD thesis, which ended in 2014 and focused on inkjet-printed microelectronic devices and circuits.*

*From this period, I would like to highlight the creation of the* ***Printed Electronics (PE) laboratory (UAB)*** *and my co-leadership of an* ***Inkjet-printed OTFT Pilot Line*** *(2011-2017) with the Technical University of Chemnitz (TUC) within the EU TDK4PE project, where I completed a research stay of 3 months.* ***The fabrication of 50K OTFTs was an outstanding milestone which has not been matched worldwide until now.***

***In 2014****, I joined the Institute of Microelectronics of Barcelona (IMB-CNM) as a Researcher in charge of the Printed Microelectronics Team within the ICAS Group integrated by 8 Pre- & Post-Doc.* ***I also led the creation of the Printe-Lab, of which I have been the scientific leader*** *until 2022 when it moved into the ICTS “Micro and Nanofabrication Clean Room”.*

*Since I resumed my scientific career in 2009, my research activity has been intense with the supervision of 8 PhD theses (three in process), the publication of 56 articles in journals and 78 publications and invited talks in conferences and participant, PI or co-PI in more than 77 EU, national and regional R&D projects at national and international level. I also hold 2 patents.*

*In parallel, I have been strongly involved as PI and co-PI in R&D projects with the submission of several proposals (33 national and 13 EU & Int), of which 29 have been approved with a total financing of 5,048 M€ in projects and 219,6 K€ in contracts.*

*Recently, I co-founded a new spin-off company called “Flexible Integrated Circuits SL” (FlexiiC) and I have been a visiting researcher at Karlsruhe Institute of Technology (DE) for one year to collaborate in the creation of a Pilot Line for oxide-based inkjet low-voltage (<1V) TFTs.*

*My late incorporation into research following an unconventional path has led to an anomalous CV with many technology transfer activities but reduced scientific contributions in the first part of my career. However, from 2009 onwards, I have been involved in intense research activities and some important milestones such as the creation of a reference group both in TFT additive manufacturing and Process Design Kit (PDK) development.*

*My current research interests are additive manufacturing technologies such as inkjet printed electronic devices and systems, sustainable and eco-friendly electronics, electrical characterization, layout post-processing for inkjet, PDK integration, and organic integrated circuit (IC) design.*

**Number of PhD Thesis supervised** during the last 10 years: 8

**Number of PhD Thesis** on-going: 2

**Total citations**: 1003 (Scopus), 1352 (Google Scholar)

Citations/Year (average last 5 year not including the current year): 203

Number of documents in **Q1 journals**: 22 (53%)

Number of documents in **Q2 journals**: 10 (24%)

**h-index**: 18 (Scopus), 21 (Google Scholar)

**Normalized Impact** (IN): 1,8162 (CiteScore without Proceedings, >1 indicates that impact of publications is greater than the world average for their subject area).

**Part C. RELEVANT MERITS**

**C.1. Publications (55 articles in Scopus)**

* Leung, T. S. W., Ramon, E., & Martínez-Domingo, C. (2023). Low‐Temperature Plasma Sintering of Inkjet‐Printed Metal Salt Decomposition Inks on Flexible Substrates. Advanced Engineering Materials, 25(2), 2200834. DOI: /10.1002/adem.202200834. (IF =4.12 @ 2022, Q2 - 146/345-PM).
* August Arnal, Carme Martínez Domingo, Lluís Terés, Eloi Ramon, (2022). “A complete compact model for simulation of organic electronic systems”. Organic Electronics. 108, pp. 106574. Elsevier, DOI: /10.1016/j.orgel.2022.106574. (IF =3.86 @ 2022, Q2 - 165/345-UB).
* G. Cadilha Marques; M. Tahoori; J. Aghassi-Hagmann; …. E. Ramon; Y. Romanyuk,(10/11) (2020). “Fabrication and Modeling of pn-Diodes Based on Inkjet Printed Oxide Semiconductors”. IEEE Electron Device Letters. 41-1, pp. 187-190. DOI: /10.1109/LED.2019.2956346. (IF =4.22 @ 2020, Q1 - 48/266-IQ).
* A. Arnal; A. Crespo-Yepes; E. Ramon; L. Teres; R. Rodriguez; M. Nafria, (2020). “DC Characterization and Fast Small-Signal Parameter Extraction of Organic Thin Film Transistors with Different Geometries”. IEEE Electron Device Letters. 41 - 10, pp. 1512 - 1515. DOI: /10.1109/LED.2020.3021236. (IF =4.22 @ 2020, Q1 - 48/266-IQ).
* Conti, S., Martínez‐Domingo, C., Lay, M., Terés, L., Vilaseca, F., & Ramon, E., (2020). ”Nanopaper‐Based Organic Inkjet‐Printed Diodes”, Advanced Materials Technologies, 5(6), 1900773. (IF =5.39 @ 2019, Q1 - 53/293-PM).
* Martínez-Domingo, C., Conti, S., De La Escosura-Muñiz, A., Terés, L., Merkoçi, A., & Ramon, E. (2020). “Organic-based field effect transistors for protein detection fabricated by inkjet-printing”. Organic Electronics, 84, 105794. DOI: /10.1016/j.orgel.2020.105794. (IF =3.31 @ 2020, Q2 – 121/314-UB).
* Zea, M., Moya, A., Fritsch, M., Ramon, E., Villa, R., & Gabriel, G., “Enhanced performance stability of iridium oxide based pH sensors fabricated on rough inkjet-printed platinum”. ACS applied materials & interfaces, 2019, DOI: 10.1021/acsami.9b03085, (IF =8.09 @ 2017, Q1 - 26/285-PM).
* Moya, A., Ortega-Ribera, M., Guimerà, X., Sowade, E., Zea, M., Illa, X., Ramon, E., Villa, R., Gracia-Sancho, J., Gabriel, G., “Online oxygen monitoring using integrated inkjet-printed sensors in a liver-on-a-chip system”, Journal Lab on a Chip, 2018, 18(14), 2023-2035, DOI: 10.1039/C8LC00456K, (IF =5.96 @ 2017, Q1 - 5/79-CO).
* Martínez-Domingo, C., Conti, S., Terés, L., Gomes, H. L., & Ramon, E., “Novel flexible inkjet-printed Metal-Insulator-Semiconductor organic diode employing silver electrodes”, Journal Organic Electronics, 2018, Volume 62, Pages 335-341. DOI: 10.1016/j.orgel.2018.08.011, (IF =3.68 @ 2017, Q1 - 28/146-UB).
* Pritesh Gokhale, Dana Mitra, Enrico Sowade, Kalyan Yoti Mitra, Henrique Leonel Gomes, Eloi Ramon, Ammar Al-Hamry, Olfa Kanoun and Reinhard R Baumann, “Controlling the crack formation in inkjet-printed silver nanoparticle thin-films for high resolution patterning using intense pulsed light treatment” in Nanotechnology (IOP Publishing), 2017, Volume 28, Number 49, DOI: 10.1088/1361-6528/aa9238, (IF = 3.44 @2016, Q1 - 59/275-PM).
* Mitra, K. Y., Polomoshnov, M., Martínez‐Domingo, C., Mitra, D., Ramon, E., & Baumann, R. R. ”Fully Inkjet‐Printed Thin‐Film Transistor Array Manufactured on Paper Substrate for Cheap Electronic Applications”. Advanced Electronic Materials 2017, 3, 1700275. DOI: 10.1002/aelm.201700275, (IF = 4.193 @2016, Q1 - 24/147-UB).
* Ramon, E., Martínez-Domingo, C., Alcalde-Aragonés, A., & Carrabina, J., “Development of a Simple Manufacturing Process for All-Inkjet Printed Organic Thin Film Transistors and Circuits”, IEEE Journal on Emerging and Selected Topics in Circuits and Systems, Pages 161-170, Volume 7, Issue 1, March 2017, DOI: 10.1109/JETCAS.2016.2617205, (IF = 2.542 @2016, Q2 - 79/260-IQ).
* Moya, A., Sowade, E., del Campo, F. J., Mitra, K. Y., Ramon, E., Villa, R., Baumann, RR. & Gabriel, G. “All-inkjet-printed dissolved oxygen sensors on flexible plastic substrates”, Journal Organic Electronics, Volume 39, Pages 168-176, December 2016, DOI: /10.1016/j.orgel.2016.10.002, (IF = 3.471 @2015, Q1 - 53/271-PM).
* Sowade, E., Ramon, E., Mitra, K. Y., Martínez-Domingo, C., Pedró, M., Pallarès, J., Loffredo, F., Villani, F., Gomes, H.L., Terés, Ll., Baumann, R. R., “All-inkjet-printed thin-film transistors: manufacturing process reliability by root cause analysis”, Nature Scientific Reports, 6, 33490, 2016, DOI: /10.1038/srep33490, (IF = 5.228 @2015, Q1 - 7/63-RO).
* Enrico Sowade, Kalyan Yoti Mitra, Eloi Ramon, Carme Martinez-Domingo, Fulvia Villani, Fausta Loffredo, Henrique L Gomes, Reinhard R Baumann, “Up-scaling of the manufacturing of all-inkjet-printed organic thin-film transistors: Device performance and manufacturing yield of transistor arrays”, Organic Electronics, Volume 30, March 2016, Pages 237-246, ISSN 1566-1199, (IF = 3.471 @2015, Q1 -25/145-UB).
* Medina‐Sánchez, M., Martínez‐Domingo, C., Ramon, E., & Merkoçi, A., “An Inkjet‐Printed Field‐Effect Transistor for Label‐Free Biosensing”, Advanced Functional Materials, Vol. 24, Issue 40, pages 6291-6302 (2014), ISSN: 1616-301X, DOI: 10.1002/adfm.201401180, (IF = 10.439 @2013, Q1 - 7/136-UB).

**C.2. Congress**

* Contributions to International and national Conferences: 78 (7 invited and 39 oral).

**C.3. Research projects**

1. 2023-2026 SUSTRONICS: “Sustainable and green electronics for circular economy”. **EU HORIZON-KDT-JU-2022-2-RIA**. Philips BV + 43 partners. PI: Eloi Ramon. IMB-CNM budget: 654.695 €.
2. **2020-2022 Marie Skłodowska-Curie Action (MSCA) COFUND (801342) Tecniospring**: “Flexible Printed Lab-on-a-Foil for personal PoC” (FlexPrintLab). European Comission - Agència per la Competitivitat de l'Empresa (ACCIÓ). The project includes 1 year of research stay at Karlsruhe Institute of Technology (KIT), Germany. PI: Eloi Ramon. budget: 136.481 €.
3. 2017-2021 BrainCom: High-density cortical implants for cognitive neuroscience and rehabilitation of speech using braincomputer interface. ***H2020-FETPROACT-2016-2017 Grant nr. 732032***. PI: Lluís Terés & Francesc Serra-Graells. IMB-CNM budget: 1.069.380 €.
4. SENSIFLEXTAG: Plataforma avanzada para aplicaciones IoT con printed electronics para soluciones de trazabilidad, monitorización y localización de personas o productos en entorno de riesgo. Retos Colaboración (RTC) - MINECO ***RTC-2017-6679-7*** (2017-2021). PI: L. Terés & E. Ramon. Importe: 377.587 €.
5. DEFlexH: Dispositivos Electrónicos Flexibles para control y supervisión Hospitalaria de pacientes. Retos Colaboración (RTC) – MINECO ***RTC-2015-4380-1*** (2015-2017). IP: L. Terés & E. Ramon. Importe: 176.000 €.
6. NANOCARDIOFLEX: Desarrollo de biosensores sobre tecnología flexible y rígida para la detección de marcadores cardíacos. Retos Colaboración (RTC) – MINECO ***RTC-2015-4184-1*** (2015-2017). PI: L. Terés & E. Ramon. Importe: 175.584 €.
7. ChiplessRFID: Desarrollo tecnológico de tags chipless RFID mediante tecnología de impresión sobre sustratos de bajo coste para su integración en sistemas de modernización electoral. Retos Colaboración (RTC) – MINECO ***RTC-2014-2550-7*** (2014-2016). SCYTL SECURE ELECTRONIC VOTING, S.A., UAB, IMB-CNM (CSIC). PI: L. Terés & E. Ramon. Importe: 335.231 €.
8. TDK4PE: Technology & Design Kits for Printed-Electronics, ***FP7-287682-TDK4PE***; SensingTex S.L., Technische Universität Chemnitz, Flexink, CSIC, ENEA, Universidad Algarve, INFINISCALE S.A., Phoenix B.V., 3D-Micromac AG, UAB. EU Commission. 10/2011 - 10/2014. PI: J.Carrabina & E.Ramon. Budget: 571.024 €.
9. FP7-247745-FLEXNET. Network of Excellence for building up Knowledge for improved Systems Integration for Flexible Organic and Large Area Electronics and its exploitation (**FlexNet**). EU Commission. 01/01/2010 - 31/12/2012. PI: J.Carrabina & E.Ramon.

**C.4. Contracts, technological or transfer merits**

1. PATENTE “PROCEDIMIENTO DE FABRICACIÓN DE CIRCUITOS INTEGRADOS RFID NO BASADOS EN SILICIO”. Application number ES-202130504. Holder: Inteligencia Artificial Impresa SL, IMB-CNM(CSIC). E. Ramon: 10%.
2. PATENTE “FLEXIBLE AND LIGHTWEIGHT DIODE AND ITS PROCESS OF MANUFACTURING”. Application number PCT-EP20382214.3. Holder: UdG, Univ-. Algarve (PT), IMB-CNM(CSIC). E. Ramon: 20%.
3. 2021-2022 Consultancy Contract with Smartkem Ltd for the development of a Full-Custom Digital Design PDK. PI: E. Ramon. Importe: 40.306 €.
4. 2015-2017 SmartBallot: nuevos sistemas de voto electrónico. Scytl Secure Electronic Voting S.A. PI: L. Terés & E. Ramon. Importe: 265.000 €.
5. 2014-2015 HENKEL Development and characterization of mixed printed-electronics and clean-room technologies. PI: L. Terés & E. Ramon. Budget: 134.463 €.