

**Titlu proiect: „SENZORI SI SISTEME INTEGRATE ELECTRONICE SI FOTONICE PENTRU SECURITATEA PERSOANELOR SI A INFRASTRUCTURILOR” SENSIS**  
**Categoria de proiect: Proiecte complexe realizate în consorții**  
**Contractul de finanțare: 71PCCDI/2018**  
**Responsabil proiect: dr.Gartner Florica-Mariuca**

## Lista rezultate 2018-2020

| Nr. crt.                                                                                                                                                                                                                   | NUME AUTORI                                                                                                                                                                        | TITLUL ARTICOLULUI/<br>CĂRȚII /<br>COMUNICĂRII ȘTIINȚIFICE                                                                                             | REVISTA /<br>VOLUMUL/EDITURA IN<br>CARE A APARUT /<br>CONFERINȚA LA CARE S-<br>A COMUNICAT           | ANUL<br>PUBLICA<br>RII/<br>COMUNIC<br>ARI |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|-------------------------------------------|
| S-a realizat sesiunea de training intitulata „Materiale pentru senzori si generatoare de energie – Tehnici de depunere si caracterizare“, sustinuta de Dr. Mircea Modreanu de la Tyndall National Institute, Cork, Irlanda |                                                                                                                                                                                    |                                                                                                                                                        |                                                                                                      | 2018                                      |
| Proceeding-uri CAS (International Semiconductor Conference)                                                                                                                                                                |                                                                                                                                                                                    |                                                                                                                                                        |                                                                                                      |                                           |
| 1                                                                                                                                                                                                                          | M.Nicolescu,<br>M. Anastasescu,<br>J. M. Calderon Moreno,<br>S. Preda, I. Stanculescu,<br>M. Moderanu,<br>V. Kampylafka,<br>E. Aperathitis, M. Gartner                             | “Investigation of Structural, Optical, <b>Piezoelectric</b> and Luminescence Properties of N-doped ZnO Thin Films Deposited by RF Magnetron Sputtering | International Semiconductor Conference (CAS), 9-11 October 2019, Sinaia, Romania                     | 2019                                      |
|                                                                                                                                                                                                                            | Mariana Chelu, Hermine Stroescu, Jose Calderon Moreno, Mihai Anastasescu, Silviu Preda, Mariuca Gartner, Carmen Moldovan,                                                          | Piezoelectric 1-D nanostructures for the energy harvesting applications                                                                                |                                                                                                      | 2019                                      |
| COMUNICARI ȘTIINȚIFICE INTERNAȚIONALE                                                                                                                                                                                      |                                                                                                                                                                                    |                                                                                                                                                        |                                                                                                      |                                           |
| 1                                                                                                                                                                                                                          | H. Stroescu, M. Anastasescu, L. Duta, I.N. Mihailescu, G.E. Stan, A. Szekeres, C.Moldovan, M.Zaharescu, M. Gartner                                                                 | AlN thin films for piezoelectric devices                                                                                                               | Spring Meeting of the European Materials Research Society, EMRS-2019, May 27-31, 2019, Nice, France) | 2019                                      |
| 2                                                                                                                                                                                                                          | Maria Zaharescu, Mariuca Gartner, Susana Mihaiu, Cristina Maria Vladut, Ecaterina Tenea , Silviu Preda , Jose M. CalderonMoreno, Hermine Stroescu, Irina Atkinson, Carmen Moldovan | ZnO nanostructures obtained by chemical methods with special applications                                                                              | Euronanoforum 2019, June 12-14, 2019, Bucharest, Romania                                             | 2019                                      |
| 3                                                                                                                                                                                                                          | M. Nicolescu, M. Anastasescu, J.M. Calderon Moreno, M. Gartner, S. Preda.                                                                                                          | The Structural, Optical, Piezoelectic and Luminescence Properties of N-doped ZnO Thin Films Deposited by RF Magnetron Sputtering                       |                                                                                                      | 1                                         |

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|-----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
|                       | I. Stanculescu,<br>M. Moderanu,<br>V. Kampylafka,<br>E. Aperathitis                                                                                                                                                         |                                                                                                                                                     | 21st Romanian International<br>Conference on Chemistry and<br>Chemical Engineering, RICCE<br>21, September 4 – 7, 2019, Black<br>Sea Coast Constanta- Mamaia,<br>Romania | <b>2019</b> |
| <b>4</b>              | Mariana Chelu, Hermine<br>Stroescu, Jose Calderon<br>Moreno, Silviu Preda,<br>Madalina Nicolescu,<br>Mariuca Gartner, Carmen<br>Moldovan, Marin Gheorghe                                                                    | Development and characterization<br>of PMMA/ZnO nanowires based<br>piezoelectric nanogenerators                                                     |                                                                                                                                                                          |             |
| <b>5</b>              | M.Gartner, S. Mihaiu,<br>C.Vladut, J. Calderon,<br>M.Anastasescu, H.Stroescu,<br>S.Preda, E.Tenea,<br>M.Zaharescu, C.Moldovan,<br>P.Terziyska, A.Szekeres                                                                   | Depositor and characterization of<br>doped and undoped ZnO thin Films<br>obtained by physical and chemical<br>routes for piezoelectric applications | Twenty-first International<br>Summer School on Vacuum,<br>Electron and Ion Technologies;<br>23 – 27 September 2019, Sozopol,<br>Bulgaria                                 | <b>2019</b> |
| <b>6</b>              | H. Stroescu, M. Anastasescu,<br>M. Chelu, E. Tenea, D.<br>Mitrea, P. Terziyska,<br>A. Szekeres, C. Moldovan, L.<br>Duta, I.N. Mihailescu, R.<br>Birjega, I. Boierasu, M.<br>Dinescu, G.E. Stan, M.<br>Zaharescu, M. Gartner | Study of Different Metal Oxides<br>Films for Integration in<br>Piezoelectric Microsystems                                                           |                                                                                                                                                                          |             |
| <b>7</b>              | M. Chelu, H. Stroescu,<br>M. Anastasescu,<br>J.M. Calderon-Moreno,<br>S. Preda, M. Stoica,<br>Z. Fogarassy, P. Petrik,<br>M. Gheorghe, C. Moldovan,<br>M. Gartner                                                           | High-quality PMMA/ZnO NWs<br>piezoelectric coating on rigid and<br>flexible metallic substrates                                                     | Applied Surface Science 529<br>(2020) 147135 (FI=5.155)<br>Premiat                                                                                                       | <b>2020</b> |
| <b>ALTE rezultate</b> |                                                                                                                                                                                                                             |                                                                                                                                                     |                                                                                                                                                                          |             |
|                       | Finalizare teza de doctorat                                                                                                                                                                                                 | Drd. Mariana Chelu a lucrat la completarea tezei cu<br>rezultatele recente obtinute in proiect<br>Data sustinerii tezei: 2021                       |                                                                                                                                                                          | <b>2020</b> |

#### ALTE realizari

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|-------------------------------------------------------------------------------|-------------|
| Contributie financiara pentru repararea echipamentului SEM al<br>institutului | <b>2019</b> |
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#### Lista achizițiilor realizate în cadrul proiectului

| Denumire echipament             | Categorie de achiziții*:<br>(numai mijloace fixe) | Valoarea<br>(lei) | Locație |
|---------------------------------|---------------------------------------------------|-------------------|---------|
| Laptop HP ProBooh 470G5,8GB     | Directa/2018                                      | 3799.99           | Lab.4   |
| Compresor fara ulei Kaeser      | Directa/2019                                      | 8611.91           | Lab.4   |
| Cuptor L3/12 cu controller C420 | Directa/2020                                      | 26,313.52         | Lab.4   |
| Sistem ventilatie cuptor        | Directa/2020                                      | 2,668.40          | Lab.4   |

Responsabil proiect,  
Dr.Gartner Florica-Mariuca