

UTILIZAREA HOLISTICĂ A HIDROGENULUI VERDE ÎN CAPTAREA CO₂ DIN GAZELE
DE ARDERE PENTRU NEUTRALITATEA CLIMATICĂ - HOL-H-CO₂-FG

Lucrări publicate în reviste Q1 și Q2 cu FI > 1 Număr propus: 9 REALIZAT: 10

1. STOICA D., MIHĂESCU L., LAZAROIU G., LAZAROIU G. C., ***THE TECHNICAL AND ECONOMIC ASPECTS OF INTEGRATING ENERGY SECTORS FOR CLIMATE NEUTRALITY***, Sustainability, ISSN: 2071-1050, 2024, 16, 8070. Open Acces, <https://doi.org/10.3390/su16188070>, IF: 3.3, **Q2**.
2. STOICA D., MIHĂESCU L., LAZAROIU G., LAZAROIU G. C., ***GREEN HYDROGEN, A SOLUTION FOR REPLACING FOSSIL FUELS TO REDUCE CO₂ EMISSIONS***, Processes, eISSN: 2227-9717, 2024, 12(8), 1651, <https://doi.org/10.3390/pr12081651>, IF:3.5, **Q2**.
3. Rotaru S, PANA C, Negurescu N, CERNAT AI, Nutu C, Fuiiorescu D, LAZAROIU G, ***CNG IMPACT ON COMBUSTION QUALITY OF A DIESEL ENGINE FUELED IN DIESEL-GAS MODE***, Heliyon, eISSN: 2405-8440, 2024, 9.3, e13889, DOI: <https://doi.org/10.1016/j.heliyon.2023.e13889>, Open Acces, IF:4, **Q2**.
4. LAZAROIU G., MIHAESCU L., GRIGORIU R. M., NEGREANU G. P., STOICA D., ***POSSIBILITIES OF CLIMATE CONTROL OF POULTRY COMPLEXES THROUGH CO-COMBUSTION OF POULTRY WASTE-SOLID BIOMASS FOR AGRICULTURE IN ROMANIA***, Agriculture, eISSN: 2077-0472, 2024 14(3), 428, <https://doi.org/10.3390/agriculture14030428>, OpeAcces, IF:3.6, **Q1**.
5. STOICA D., MIHĂESCU L., LAZAROIU G., LAZAROIU G. C., ***THE STORAGE PROCESS OF ELECTRIC ENERGY PRODUCED FROM RENEWABLE SOURCES FROM HYDROGEN TO DOMESTIC HOT WATER HEATING***, Processes, eISSN: 2227-9717, 2024, 12(5), 1024, <https://doi.org/10.3390/pr12051024>, IF:3.5, **Q2**.
6. LAZAROIU A. C., GMAL OSMAN M., STREJOIU C. V., LAZAROIU, G., ***A COMPREHENSIVE OVERVIEW OF PHOTOVOLTAIC TECHNOLOGIES AND THEIR EFFICIENCY FOR CLIMATE NEUTRALITY***, Sustainability, ISSN: 2071-1050, 2023, 15(23), 16297, doi.org/10.3390/su152316297, Open Access, IF:3.9, **Q2**.
7. Sandu C., PANA C., Negurescu N., LAZAROIU G., CERNAT A., Georgescu R., Nutu C., ***THE INFLUENCE OF N-BUTANOL ADDITION IN GASOLINE ON THE COMBUSTION IN THE SPARK IGNITION ENGINE***, Sustainability, ISSN: 2071-1050, 2023, 15 (18), 14009, doi.org/10.3390/su151814009, Open Access, IF:3.9, **Q2**.
8. Dorel S., Gmal Osman M., Strejoiu C. V., LAZAROIU G., ***EXPLORING OPTIMAL CHARGING STRATEGIES FOR OFF-GRID SOLAR PHOTOVOLTAIC SYSTEMS: A COMPARATIVE STUDY ON BATTERY STORAGE TECHNIQUES***, Batteries-Basel, ISSN: 2313-0105, 2023, 9 (9), 470, doi.org/10.3390/batteries9090470, Open Access, IF:4.0, **Q2**.
9. LAZAROIU G., Gmal Osman M., Strejoiu C. V., ***PERFORMANCE EVALUATION OF RENEWABLE ENERGY SYSTEMS: PHOTOVOLTAIC, WIND TURBINE, BATTERY BANK, AND HYDROGEN STORAGE***, Batteries-Basel, ISSN: 2313-0105, 2023, 9 (9), 468, doi.org/10.3390/batteries9090468, Open Access, IF:4.0, **Q2**.
10. CERNAT AI, PANA C, Negurescu N, Nutu C, Fuiiorescu D, LAZAROIU G, ***ASPECTS OF AN EXPERIMENTAL STUDY OF HYDROGEN USE AT AUTOMOTIVE DIESEL ENGINE***, Heliyon, eISSN: 2405-8440, 2023, 9.3, e13889, DOI: <https://doi.org/10.1016/j.heliyon.2023.e13889>, Open Acces, IF:4, **Q2**.

Lucrări științifice publicate în reviste indexate in baze de date internaționale

1. MIHAESCU L., LAZAROIU G., NEGREANU G-P., Jarcu E-A, Stoica D., **ASPECTE ALE UTILIZRII HIDROGENULUI IN INCALZIRERA REZIDENTIALA**, Revista Energetica, ISSN: 1453-2360, anul 71, nr.12, 2023, pag 876-883, Index Copernicus.
2. Moise IM, PISA I, NEGREANU G-P., **ANALIZA COMPORTARII CICLULUI COMBINAT GAZ-ABUR LA FUNCTIONAREA CU AMESTEC GAZ NATURAL-HIDROGEN**, Revista Energetica, ISSN: 1453-2360, anul 71, nr.12, 2023, pag 884-893. Index Copernicus
3. Niculescu A., MIHAESCU L., PISA I, Ana G., Bulubasa G., **DEZVOLTAREA UNEI INSTALATII EXPERIMENTALE PENTRU STUDIUL ARDERII AMESTECURILOR DE HIDROGEN SI METAN**, Revista Energetica, ISSN: 1453-2360, anul 71, nr.12, 2023, pag 894-898. Index Copernicus.
4. SIMION I., LAZAROIU G., GRIGORIU R.M., **THE HYDROGEN - CARBON DIOXIDE BINOMIAL, A POSSIBLE NEW ENERGY VECTOR**, University POLITEHNICA of Bucharest Scientific Bulletin, Series B Chemistry and Materials Science, ISSN: 1454-2331, 2023, Vol. 85 (3), pag. 73-83. IF: 0.5, Q3.
5. Gmal Osman M., CIUPAGEANU D., Stan A., **ANALYSIS OF SOLAR RADIATION IN SUDAN AND OPTIMAL LOCATION OF PHOTOVOLTAIC PANELS**, University POLITEHNICA of Bucharest Scientific Bulletin Series C-Electrical Engineering and Computer Science, ISSN: 2286-3540, eISSN: 2286-3559, 2022, Volume 84, Issue 4, Pages 10-17, IF:0.5, Q4.
6. GRIGORIU R-M., LAZAROIU G., SIMION, I., **COMBUSTION OF POULTRY MANURE WITH SOLID BIOMASS – AN ALTERNATIVE FOR ENVIROMENTAL PROTECTION AND LOCAL ENERGY PRODUCTION**, UPB Scientific Bulletin, Series D: Mechanical Engineering, ISSN: 14542358, 2022, Volume 84, Issue 3, Pages 155-174.
7. Sandu Cr., PANA C., Negurescu N, CERNAT Al., Fuioreescu D, Georgescu R, Nutu C, **THE STUDY OF THE SPARK IGNITION ENGINE PERFORMANCE AT FUELING WITH N-BUTANOL-GASOLINE MIXTURE**, IOP Conference Series: Materials Science and Engineering, volume 1262 (2022) no. 012073, <https://doi:10.1088/1757-899X/1262/1/012073>, pp.1-12, <https://iopscience.iop.org/article/10.1088/1757-899X/1262/1/012073/meta>.

Brevet (sau cereri de brevet) Naționale

1. LAZAROIU G., PISA I., Ștefănescu A.E., NEGREANU G.P., MIHAESCU L., Stoica D., **INSTALATIE DE CAPTARE CO2 DIN GAZELE DE ARDERE PRIN TEHNOLOGIA GAZEIFICARII CU PAT FIX DE MANGAL**, Cerere de Brevet de invenție nr. A / 00199 din 22 APR 2024.
2. LAZAROIU G., PISA I., Ștefănescu A.E., NEGREANU G.P., MIHAESCU L., Stoica D., **MODUL DE ARZATOR CH4 / H2 PENTRU INSTALATIILE REZIDENTIALE DINTR-UN SMART CITY**, OSIM, Cerere de Brevet de invenție nr. A / 00239 din 16 May 2023.

Participări la conferințe

1. Georgescu R., PANA C., Negurescu N., CERNAT A., Nutu C., Panait A., **ANALYSIS OF THE COMBUSTION AT THE USE OF LOW DOSES OF HYDROGEN IN THE AUTOMOTIVE SPARK IGNITION ENGINE**, Conferinta Internationala EAEC CONAT 2024, The International Congress of Automotive and Transport Engineering, November 6-8, 2024, Brasov, Romania.
2. VATUIU T., Iana T., **IMPROVING THE RELATIONSHIP OF TAXPAYERS WITH TAX AUTHORITIES THROUGH THE DIGITALIZATION OF PUBLIC SERVICES**, <https://www.utm.ro/conferinta-imas-2024/>, INTERNATIONAL MULTIDISCIPLINARY ACADEMIC STUDIES CONFERENCE (IMAS 2024) (2nd EDITION) Conference theme: Challenges of the 21st century from legal, economic and medical perspective Târgu Jiu, 10 May 2024
3. VATUIU T., Iana T., **EUROPE'S DIGITAL TRANSITION AND THE EUROPEAN GREEN DEAL - CHALLENGES OF THE DIGITAL DECADE**, Conferinta Internationala "EDUCATIE SI CREATIVITATE PENTRU O SOCIETATE BAZATA PE CUNOASTERE", Editia a XVIII-a, 21 - 23 noiembrie 2024, Tg-Jiu, Romania.

4. MIHAESCU L., LAZAROIU G., GRIGORIU R-M., Stoica D., Mohammed Gmal Osman, ***APPLICATION OF GASIFICATION TECHNOLOGY TO CAPTURE CO₂ FROM COMBUSTION GASES***, The 2024 IEEE Conference on Advanced Topics on Measurement and Simulation (ATOMS), 28-30 August 2024, Constanta Maritime University, Cuartului2, Constanta, Romania.
5. Mohammed Gmal Osman, Strejoiu C-V., Panait C., LAZAROIU G., Stoica D., ***OPTIMAL POWER SYSTEM DESIGN FOR OFF-GRID RESIDENCES IN DOBROGEA, ROMANIA: INTEGRATING RENEWABLE ENERGY AND GENERATOR TECHNOLOGY***, The 2024 IEEE Conference on Advanced Topics on Measurement and Simulation (ATOMS), 28-30 August 2024, Constanta Maritime University, Cuartului2, Constanta, Romania.
6. Strejoiu C-V., Mohammed Gmal Osman, Panait C., LAZAROIU G., Stoica D., ***OPTIMIZING SOLAR PHOTOVOLTAIC SYSTEMS: A GEOMETRIC APPROACH TO ENHANCE ENERGY PRODUCTION AND ECONOMIC VIABILITY***, The 2024 IEEE Conference on Advanced Topics on Measurement and Simulation (ATOMS), 28-30 August 2024, Constanta Maritime University, Cuartului2, Constanta, Romania.
7. NEGREANU G. P., LAZAROIU G., MIHAESCU L., PISA I., ***ANALYSIS MODEL FOR CO₂ EMISSIONS OF ROMANIAN POWER PLANTS FUELED WITH NATURAL GAS, 2024***, 9th International Conference on Energy Efficiency and Agricultural Engineering (EE&AE), 27-29 June 2024, Ruse, Bulgaria, ISBN: 979-8-3503-6938-0/24/\$31.00, DOI: 10.1109/EEAE60309.2024.10600568, (pp. 1-4), IEEE Xplore: 23 July 2024.
8. MIHAESCU L., PISA I., NEGREANU G.P., LAZAROIU G., GRIGORIU R-M., Stoica D., ***VEGETABLE BIOMASS – SOURCE OF GREEN HYDROGEN PRODUCTION THROUGH GASIFICATION, 2024***, 9th International Conference on Energy Efficiency and Agricultural Engineering (EE&AE), 27-29 June 2024, Ruse, Bulgaria, ISBN: 979-8-3503-6938-0/24/\$31.00, DOI: 10.1109/EEAE60309.2024.10600631, (pp. 1-6), IEEE Xplore: 23 July 2024.
9. STREJOIU C-V., Gamal Osman M., LAZAROIU G., Stoica D., Panait C., ***EFFICIENCY EVALUATION AND PERFORMANCE ANALYSIS OF A PHOTOVOLTAIC PARK CONNECTED TO A 20 KV DISTRIBUTION NETWORK IN GALATI COUNTY, ROMANIA, 2024***, 9th International Conference on Energy Efficiency and Agricultural Engineering (EE&AE), 27-29 June 2024, Ruse, Bulgaria, ISBN: 979-8-3503-6938-0/24/\$31.00, DOI: 10.1109/EEAE60309.2024.10600539, (pp. 1-5), IEEE Xplore: 23 July 2024.
10. Gamal Osman M., STREJOIU C-V., Panait C., Lazaroiu A.C., LAZAROIU G., ***MICROGRID MODEL FOR EVALUATING THE OPERATIONAL DYNAMICS OF SOLAR-POWERED HYDROGEN PRODUCTION, 2024***, 9th International Conference on Energy Efficiency and Agricultural Engineering (EE&AE), 27-29 June 2024, Ruse, Bulgaria, ISBN: 979-8-3503-6938-0/24/\$31.00, DOI: 10.1109/EEAE60309.2024.10600539, (pp. 1-6), IEEE Xplore: 23 July 2024.
11. VATUIU T., ***COMPUTERIZED DECISION ASSISTANCE FOR THE MANAGEMENT OF RENEWABLE RESOURCES IN THE CURRENT CONTEXT OF DIGITALIZATION AND THE IMPLEMENTATION OF THE NATIONAL HYDROGEN STRATEGY***, The 1st IMAS International Conference On Multidisciplinary Academic Studies Proceeding Book, e-ISBN: 978-605-72229-9-2, pag 149-160, Publisher Kürat ÇAPRAZ, InTraders Academic Platform Sakarya, Turkey, www.intraders.org, 13 May 2023, Târgu Jiu, Romania, <https://www.utm.ro/conferinta-imas-2023>.
12. MIHAESCU L., Stanciu D., LAZAROIU G., Jarcu E.A., GRIGORIU R.M., ***COMPARATIVE ANALYSIS FOR COMBUSTION CH₄ AND H₂ FOR COAXIAL JET BURNERS (DIFFUSE COMBUSTION)***, International Multidisciplinary Scientific GeoConference: SGEM; Albena, Bulgaria, 2023, Vol. 23, 4.1, pag. 27-33, doi:10.5593/sgem2023/4.1/s17.04.
13. LAZAROIU G., MIHAESCU L., Jarcu E.A., GRIGORIU R.M., ***CONCEPTUAL ANALYSIS ON THE USE OF HYDROGEN TO REDUCE CO₂ EMISSIONS FROM FLUE GASES***, International

14. LAZAROIU G., MIHAESCU L., NEGREANU G., GRIGORIU R. M., SIMION I., ***AN ANALYSIS OF THE ECONOMIC PRODUCTION AND USE OF GREEN HYDROGEN***, IOP Conference Series: Materials Science and Engineering, XXIIIrd National Conference on Thermodynamics with International Participation, September **2023**, Vol. 1290, No. 1, pag. 1-8, doi:10.1088/1757-899X/1290/1/012015.
15. Lazaroiu A. C., Popescu M. O., Popescu C. L., Alexandru M., Popa L. B., LAZAROIU G., *Roscia Mariacristina*, Panait, C., ***ANALYSIS OF THE OPERATION OF A UNIVERSITY CAMPUS USING RENEWABLE ENERGY SOURCES, HYDROGEN GENERATOR AND FUEL CELLS***, 13th International Symposium on Advanced Topics in Electrical Engineering (ATEE), Bucharest, Romania, **2023**, March, pp. 1-5. IEEE, doi: 10.1109/ATEE58038.2023.10108225.
16. MIHAESCU L., Stoica, D., LAZAROIU G., Jarcu E.A., ***STAGES OF HYDROGEN IMPLEMENTATION FOR A GREEN CITY OF THE FUTURE***, IEEE International Smart Cities Conference (ISC2), ISSN: 2687-8860, ISBN: 979-8-3503-9775-8, 24-27 september **2023**, Bucharest, Romania, pp. 1-4, doi: 10.1109/ISC257844.2023.10293636.
17. STREJOIU C. V., OSMAN M. G., LAZAROIU, G., ***ANALYZING ENERGY CONSUMPTION AND HOT WATER USAGE IN THE TITAN NEIGHBORHOOD OF BUCHAREST: IMPLICATIONS FOR SMART CITY DEVELOPMENT***, **2023**, SEPTEMBE, 2023 IEEE International Smart Cities Conference (ISC2) (pp. 1-6). IEEE.
18. Georgescu R., PANA C., Negurescu N., CERNAT A., Nutu C., Sandu C., ***THEORETICAL AND EXPERIMENTAL RESEARCH ON THE USE OF HYDROGEN IN THE AUTOMOTIVE SPARK IGNITION ENGINE***, XXIIIrd National Conference on Thermodynamics with International Participation, IOP Conf. Series: Materials Science and Engineering, 13-15 may **2023**, ISSN: 1757-899X, 1290 (2023) 012010, IOP Publishing, doi:10.1088/1757-899X/1290/1/012010.
19. MIHAESCU L., LAZAROIU G., *Desideri, U.*, NEGREANU G., PISA I., GRIGORIU R.M., ***CO2 ENERGY VECTOR IN THE CONCEPT OF CIRCULAR ENERGY***, IOP Conference Series: Materials Science and Engineering, XXIIIrd National Conference on Thermodynamics with International Participation, September **2023**, Vol. 1290, No. 1, pag. 1-8, doi:10.1088/1757-899X/1290/1/012014.
20. LAZAROIU G., MIHAESCU L., Balcu I., Oprea I., GRIGORIU R. M., NEGREANU G. P., Jarcu E.A., ***PARTICULARITIES OF FLUE GASES FROM ENERGY INSTALLATIONS ON THE PROCESS OF CONTINUOUS FLOW CAPTURE FOR CO2 BY DIRECT METHANATION***, IOP Conference Series: Earth and Environmental Science, **2023**, Vol. 1128, No. 1, p. 012016, doi:10.1088/1755-1315/1128/1/012016.
21. LAZAROIU G., MIHAESCU L., GRIGORIU (Tilici) R.M., SIMION I., NEGREANU G.P., ***THE CONSUMPTION OF BIOMASS AND POULTRY MANURE FOR HEATING A HALL MODULE CONSIDERING ROMANIA'S CLIMATE***, 11th International Conference on Thermal Equipment, Renewable Energy and Rural Development, TERERD **2023**, 08-10 June 2023, Bucharest, Romania. Prezentare orală.
22. LAZAROIU G., MIHAESCU L., SIMION I., GRIGORIU (Tilici) R.M., ***THEORETICAL AND EXPERIMENTAL ANALYSIS ON THE GASIFICATION OF AGRICULTURAL BIOMASS WITH A PILOT PLANT***, 11th International Conference on Thermal Equipment, Renewable Energy and Rural Development, TERERD **2023**, 08-10 June 2023, Bucharest, Romania. Prezentare orală.
23. Maravela G.L., VATUIU T., ***ENERGY OF RURAL SPACES – TECHNICAL, ECONOMIC AND SOCIAL ANALYSIS OF RENEWABLE ENERGY IN ISOLATED COMMUNITIES***, 11th International Conference on Thermal Equipment, Renewable Energy and Rural Development, TERERD **2023**, 08-10 June 2023, Bucharest, Romania. Prezentare orală.
24. LAZAROIU G, PISA I, MIHAESCU L, GRIGORIU R-M, ***REDUCTION OF CARBON DIOXIDE FROM COMBUSTION GASES BY METHANIZATION***, MEDPOWER 2022, The 13th Mediterranean Conference on Power Generation, Transmission, Distribution and Energy Conversion, 07-09 November **2022**, 1 Valletta, Malta.

25. LAZAROIU G, MIHAESCU L, NEGREANU G-P, PISA I, GRIGORIU R-M, Jarcu EA, ***BENEFITS OF HYDROGEN-RICH GAS (HRG) ON BIOMASS COMBUSTION PERFORMANCES***, ICAMS 2022 – 9th International Conference on Advanced Materials and Systems, 26-28 October **2022**, Bucharest, Romania.
26. LAZAROIU G, MIHAESCU L, Balcu I, Oprea I, GRIGORIU R-M, NEGREANU G-P, Jarcu EA, ***PARTICULARITIES OF FLUE GASES FROM ENERGY INSTALLATIONS ON THE PROCESS OF CONTINUOUS FLOW CAPTURE FOR CO2 BY DIRECT METHANATION***, 27th POWER ENGINEERING AND POWER MACHINES CONFERENCE - PEPM 2022, IOP Conference Series "Earth and Environmental Science"; ISSN: 1755-1307, 16-20 September **2022**, Sozopol, Bulgaria.
27. Gmal Osman M, CIUPAGENAU D-A, LAZAROIU G, PISA I, ***INCREASING RENEWABLE ENERGY PARTICIPATION IN SUDAN, 2022*** 11th International Conference on Renewable Energy Research and Applications (ICRERA), ISBN: 978-1-6654-7140-4/22/, IEEE, DOI: 10.1109/ICRERA55966.2022.9922827, September 18-21, **2022**, Istanbul, TURKEY.
28. Sandu CC, PANA C, Negurescu N, CERNAT AI, Nuțu C, Georgescu R, ***THE STUDY ON THE ENGINE PRESSURE VARIATION OF UTILIZING N-BUTANOL-GASOLINE BLENDS AT FUELLING SPARK IGNITION ENGINES***, Section 1 Advanced Powertrain and Propulsion, lucrare prezentată la conferința internațională The 17th European Automotive Congress, The 32nd SIAR International Congress of Automotive and Transport Engineering, 26-28 October **2022**, Timișoara, Romania, http://www.siarcongress.eu/public/conferences/4/schedConfs/4/program-en_US.pdf.
29. Georgescu R, PANA C, Negurescu N, CERNAT AI, Nuțu C, Sandu CC, ***A STUDY ON THE INFLUENCE OF UTILIZING HYDROGEN AT FUELLING SPARK IGNITION ENGINES***, Section 1 Advanced Powertrain and Propulsion, lucrare prezentată la conferința internațională The 17th European Automotive Congress, The 32nd SIAR International Congress of Automotive and Transport Engineering, 26-28 October **2022**, Timișoara, Romania, http://www.siarcongress.eu/public/conferences/4/schedConfs/4/program-en_US.pdf.
30. CERNAT AI, PANA C, Negurescu N, Nutu C, Fuiiorescu D, LAZAROIU G, ***ASPECTS OF AN EXPERIMENTAL STUDY OF HYDROGEN USE AT AUTOMOTIVE DIESEL ENGINE***, Proceedings of SEEP2022, 12-15 September **2022**, Brunel University London-UK, oral.
31. MIHAESCU L., LAZAROIU G., GRIGORIU R. M., Stanescu, L., Dragne, M., NEGREANU G. P., Panait, C. (2022, June). ***AN ANALYSIS OF THE EFFICIENCY OF FLUE GASES ENERGY POTENTIAL CONVERSION THROUGH METHANATION, 2022***, 8th International Conference on Energy Efficiency and Agricultural Engineering (EE&AE) (pp. 1-5). IEEE.

Capitol de cărți

1. Cernat, A., Pana, C., Negurescu, N., Nutu, C., LazaroIU, G. (2024). ***AN OVERVIEW ON POLLUTANT EMISSIONS OF INTERNAL COMBUSTION ENGINES***. In: LazaroIU, G.C., Roscia, M., Dancu, V.S. (eds) Energy Transition Holistic Impact Challenge (ETHIC): A New Environmental and Climatic Era. Environmental Science and Engineering. Springer, Cham. https://doi.org/10.1007/978-3-031-55448-3_6.

Lucrări științifice cu autori străini Număr propus: 6 REALIZAT: 8

1. LAZAROIU A. C., GMAL OSMAN M., STREJOIU C. V., LAZAROIU, G., ***A COMPREHENSIVE OVERVIEW OF PHOTOVOLTAIC TECHNOLOGIES AND THEIR EFFICIENCY FOR CLIMATE NEUTRALITY***, Sustainability, ISSN: 2071-1050, 2023, 15(23), 16297, doi.org/10.3390/su152316297, Open Access, IF:3.9, Q2.
2. Dorel S., Gmal Osman M., Strejoiu C. V., LAZAROIU G., ***EXPLORING OPTIMAL CHARGING STRATEGIES FOR OFF-GRID SOLAR PHOTOVOLTAIC SYSTEMS: A COMPARATIVE STUDY ON BATTERY STORAGE TECHNIQUES***, Batteries-Basel, ISSN: 2313-0105, 2023, 9 (9), 470, doi.org/10.3390/batteries9090470, Open Access, IF:4.0, Q2.
3. LAZAROIU G., Gmal Osman M., Strejoiu C. V., ***PERFORMANCE EVALUATION OF RENEWABLE ENERGY SYSTEMS: PHOTOVOLTAIC, WIND TURBINE, BATTERY BANK, AND HYDROGEN STORAGE***, Batteries-Basel, ISSN: 2313-0105, 2023, 9 (9), 468, doi.org/10.3390/batteries9090468, Open Access, IF:4.0, Q2.

4. **Gmal Osman M., CIUPAGEANU D., Stan A., ANALYSIS OF SOLAR RADIATION IN SUDAN AND OPTIMAL LOCATION OF PHOTOVOLTAIC PANELS**, University POLITEHNICA of Bucharest Scientific Bulletin Series C-Electrical Engineering and Computer Science, ISSN: 2286-3540, eISSN: 2286-3559, 2022, Volume 84, Issue 4, Pages 10-17.
5. **STREJOIU C. V., OSMAN M. G., LAZAROIU, G, ANALYZING ENERGY CONSUMPTION AND HOT WATER USAGE IN THE TITAN NEIGHBORHOOD OF BUCHAREST: IMPLICATIONS FOR SMART CITY DEVELOPMENT**, 2023, SEPTEMBE, 2023 IEEE International Smart Cities Conference (ISC2) (pp. 1-6). IEEE.
6. **Lazaroiu A. C., Popescu M. O., Popescu C. L., Alexandru M., Popa L. B., LAZAROIU G., Roscia Mariacristina, Panait, C., ANALYSIS OF THE OPERATION OF A UNIVERSITY CAMPUS USING RENEWABLE ENERGY SOURCES, HYDROGEN GENERATOR AND FUEL CELLS**, 13th International Symposium on Advanced Topics in Electrical Engineering (ATEE), Bucharest, Romania, 2023, March, pp. 1-5. IEEE, doi: 10.1109/ATEE58038.2023.10108225.
7. **Lazaroiu A. C., Gmal Osman M., Strejoiu C.V., LAZAROIU G., A COMPREHENSIVE OVERVIEW OF PHOTOVOLTAIC TECHNOLOGIES AND THEIR EFFICIENCY FOR A CLIMATE NEUTRALITY**, Preprints, doi:10.20944/preprints202310.0605.v1, 2023.
8. **LAZAROIU G., Gmal Osman M., Strejoiu C.V., EVALUATING THE EFFICIENCY OF RENEWABLE ENERGY TECHNOLOGIES: PHOTOVOLTAIC, WIND TURBINE, BATTERY BANK, AND HYDROGEN STORAGE**, Preprints, doi: 10.20944/preprints202308.0705.v1, 2023.

Lucrări prezentate în plenul conferințelor internaționale Număr propus: 3 REALIZAT: 4

1. **MIHAESCU L., CO2 ENERGY VECTOR IN THE CONCEPT OF CIRCULAR ENERGY**, XXIIIrd National Conference on Thermodynamics with International Participation May 11-13, 2023, Organized by: "Dunărea de Jos" University of Galați Romania.
2. **MIHAESCU L., THEORETICAL AND EXPERIMENTAL ANALYSIS ON THE GASIFICATION OF AGRICULTURAL BIOMASS WITH A PILOT PLANT**, 11th International Conference on Thermal Equipment, Renewable Energy and Rural Development, TERERD 2023, 08-10 June 2023, Bucharest, Romania.
3. **LAZAROIU G., OPTIMAL POWER SYSTEM DESIGN FOR OFF-GRID RESIDENCES IN DOBROGEA, ROMANIA: INTEGRATING RENEWABLE ENERGY AND GENERATOR TECHNOLOGY**, The 2024 IEEE Conference on Advanced Topics on Measurement and Simulation (ATOMS), 28-30 August 2024, Constanta Maritime University, Cuartului 2, Constanta, Romania. Prezentare in plen.
4. **LAZAROIU G., OPTIMIZING SOLAR PHOTOVOLTAIC SYSTEMS: A GEOMETRIC APPROACH TO ENHANCE ENERGY PRODUCTION AND ECONOMIC VIABILITY**, The 2024 IEEE Conference on Advanced Topics on Measurement and Simulation (ATOMS), 28-30 August 2024, Constanta Maritime University, Cuartului 2, Constanta, Romania. Prezentare in plen.

Workshop Număr propus: 3 REALIZAT: 3

1. **MANAGEMENTUL CONSUMULUI DE ENERGIE IN CENTRE DE DATE PENTRU NEUTRALITATE CLIMATICA**, Moderatori: Lucian MIHAESCU și Gheorghe LAZAROIU, Universitatea Națională de Știință și Tehnologie POLITEHNICA București, 4 Noiembrie 2024, București, Romania.
2. **PROCEDURI DE TESTARE PENTRU UTILIZAREA HOLISTICA A HIDROGENULUI CA VECTOR ENERGETIC**, Moderatori: Gheorghe LAZAROIU și Lucian MIHAESCU, Universitatea Națională de Știință și Tehnologie POLITEHNICA București, 9 Septembrie 2024, București, Romania.
3. **DECARBONIZATION / DIGITALIZATION OF SMART CITIES**, Chair: Gheorghe LAZAROIU, POLITEHNICA Bucharest, Romania; Franceco Riganti Fulginei, Roma Tre University, Italy; IEEE International Smart Cities Conference (ISC2), ISSN: 2687-8860, ISBN: 979-8-3503-9775-8, 24-27 September 2023, Bucharest, Romania.

Prezentare invitată Număr propus: 2 REALIZAT: 2

1. MIHĂESCU L., prelegerea **PREZENTUL ȘI VIITORUL HIDROGENULUI VERDE ÎN SECTORUL ENERGETIC AL ROMÂNIEI**, la UNIVERSITATEA "DUNĂREA DE JOS" DIN GALAȚI, FACULTATEA DE INGINERIE, Departamentul Sisteme Termice și Autovehicule Rutiere.
2. MIHAESCU Lucian, prelegerea **TEHNOLOGII FOTOVOLTAICE SI EFICIENȚA LOR PENTRU NEUTRALITATEA CLIMATICA DIN DOBROGEA**, la Universitatea Maritimă din Constanța, **29 august 2024**.

Masa rotunda Revista Energetica

MIHĂESCU L. LĂZĂROIU Gh. - *moderatori*, **Rolul holistic al hidrogenului în tranziția spre o energetică circulară**, Revista Energetica, ISSN: 1453-2360, anul 71, nr.12, **2023**, pag 873-875.

Persoane lună mobilități doctorale : 3 luni*pers

Drd. **Iulia Simion** a făcut un stagiul de pregătire în domeniul proiectului printr-o mobilitate Erasmus la Universitatea L'Aquila, Italia, în perioada **23 Mai 2022 – 30 Iulie 2022 (2,5 luni)**.

Drd. **Rodica-Manuela GRIGORIU** (căs. **TILICI**) a făcut un stagiul de pregătire în domeniul proiectului la Universitatea Maritimă din Constanța, pe instalația experimentală dezvoltată de echipa din acest proiect și UMC ca și coordonator, în perioada **19.09 – 01.10.2022 (0,5 luni)**.

Realizare pagina web proiect Număr propus: 1 REALIZAT: 1

Pagina web proiectului este www.climateneutrality.upb.ro.

Gheorghe LAZAROIU