

List of publication
Prof. Dr. Ing. Cormos Calin-Cristian

1. Books

1. **C.C. Cormos**, *Decarbonizarea combustibililor fosili solizi prin gazeificare*, Presa Universitară Clujană, 2008, 345 pp.
2. **C.C. Cormos**, *Ingineria Reacțiilor Chimice, Aplicații practice pentru studiul reactoarelor omogene și eterogene gaz-lichid*, Presa Universitară Clujană, 2014, 129 pp.
3. **C.C. Cormos**, *IGCC with carbon capture and storage*, Encyclopedia of Sustainable Technologies, 2017, 327-338.

2. Articles

1. **C.C. Cormos**, *Solar-based calcium looping power plant with thermo-chemical energy storage capability: A techno-economic and environmental (LCA) analysis*, Renewable Energy, 251, 2025, 123431
2. **C.C. Cormos**, *Techno-economic and environmental life cycle analysis of renewable-based combined potassium - calcium looping cycle for direct air CO₂ capture*, Journal of Environmental Chemical Engineering, 13, 2025, 116601
3. **C.C. Cormos**, A.M. Báthori, A.M. Kasza, M. Mihet, L. Petrescu, A.M. Cormos, *Integration of Direct Air Capture with CO₂ Utilization Technologies powered by Renewable Energy Sources to deliver Negative Carbon Emissions*, 35-th European Symposium on Computer Aided Process Engineering, Ghent, Belgium. 6-9 July 2025
4. **C.C. Cormos**, A.M. Bathori, M. Dragan, L. Petrescu, S. Dragan, A.M. Cormos, *Green Hydrogen and Power Co-generation by Sorption-enhanced Biogas Reforming with CO₂ Capture: An Energy, Exergy and Economic Analysis*, 20-th Conference on Sustainable Development of Energy, Water and Environment Systems (SDEWES), 5 - 10 October 2025, Dubrovnik, Croatia
5. J. Čespiva, D. Kupka, J. Ryšavý, L. Niedzwiecki, W.H. Chen, M. Jackowski, C.C. Wang, J.K. Kuo, A. Trusek, **C.C. Cormos**, T. Ochodek, *Life cycle assessment of solid*

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6. L. Petrescu, S.C. Galusnyak, A.C. Bozonc, **C.C. Cormos**, R. Scaccabarozi, M. Spinelli, E. Catalanotti, *Bio-Combined Heat & power plant integrated with calcium looping: How environmentally friendly this integration is ?*, Journal of Cleaner Production, 498, 2025, 145183
 7. S.C. Galusnyak, L. Petrescu, D.A. Chisalita, **C.C. Cormos**, *Techno-environmental assessment of methanol production using chemical looping technologies*, Energy, 318, 2025, 134808
 8. **C.C. Cormos**, *Techno-economic and environmental assessment of green hydrogen production via biogas reforming with membrane-based CO₂ capture*, International Journal of Hydrogen Energy, 101, 2025, 702-711
 9. **C.C. Cormos**, *Decarbonized green hydrogen production by sorption-enhanced biomass gasification: An integrated techno-economic and environmental evaluation*, International Journal of Hydrogen Energy, 95, 2024, 592-603
 10. S.C. Galusnyak, L. Petrescu, A. Imre-Lucaci, **C.C. Cormos**, *Towards value-added chemicals: Technical and environmental life cycle assessment evaluation of different glycerol valorisation pathways*, Sustainable Energy Technologies and Assessments, 72, 2024, 104043
 11. **C.C. Cormos**, M. Dragan, L. Petrescu, A.M. Cormos, S. Dragan, A.M. Bathori, S.C. Galusnyak, *Synthetic natural gas (SNG) production by biomass gasification with CO₂ capture: Techno-economic and life cycle analysis (LCA)*, Energy, 312, 2024, 133507
 12. F.M. Ilea, **C.C. Cormos**, S. Dragan, A.M. Cormos, *Techno-economic implications of three phase fluidized bed absorption column applied to power generation for an intensified carbon capture process*, Energy Conversion and Management, 315, 2024, 118790
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 14. V.C. Sandu, A.D. Selejan, **C.C. Cormos**, A. Pop, A.M. Cormos, *High-temperature dolomite decomposition: An integrated experimental and computational fluid dynamics analysis for calcium looping and industrial applications*, Applied Thermal Engineering, 253, 2024, 123742

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16. **C.C. Cormos**, L. Petrescu, A.M. Cormos, S. Dragan, *Solar-driven Calcium Looping Cycle for Time-flexible Carbon-free Power Generation with Thermochemical Energy Storage Capability*, Computer Aided Chemical Engineering, 53, 2024, 2017-2022
17. L. Petrescu, O. Beudean, S.C. Galusnyak, **C.C. Cormos**, *A CHEMCAD Software Design Approach for Non-Conventional Biodiesel Production Using Methyl Acetate as Feedstock*, Energies, 17 (17), 2024, 4504
18. F.M. Ilea, A.M. Cormos, V.M. Cristea, **C.C. Cormos**, *Hybrid Advanced Control Strategy for Post-Combustion Carbon Capture Plant by Integrating PI and Model-Based Approaches*, Energies, 17 (12), 2024, 2886
19. A.C. Bozonc, V.C. Sandu, **C.C. Cormos**, A.M. Cormos, *3D-CFD Modeling of Hollow-Fiber Membrane Contactor for CO₂ Absorption Using MEA Solution*, Membranes, 14 (4), 2024, 86
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21. **C.C. Cormos**, L. Petrescu, A.M. Cormos, *Green Hydrogen Production based on Biogas Reforming Integrated with Membrane-based CO₂ Capture*, Chemical Engineering Transactions, 114, 2024, 343 – 348
22. **C.C. Cormos**, M. Dragan, L. Petrescu, A.M. Cormos, S. Dragan, *Assessment of Renewable Energy-based Combined Potassium - Calcium Looping Cycles for Direct Air CO₂ Capture*, 19-th Conference on Sustainable Development of Energy, Water and Environment Systems (SDEWES), 8 - 12 September 2024, Rome, Italy
23. V.C. Sandu, **C.C. Cormos**, A.M., Cormos, *Modelling of Chemical Looping Water Splitting for Green Hydrogen Production using Iron-Based Oxygen Carriers in a Packed Bed System*, 19-th Conference on Sustainable Development of Energy, Water and Environment Systems (SDEWES), 8 - 12 September 2024, Rome, Italy
24. A.D. Selejan, V.C. Sandu, A.C. Bozonc, A.M. Cormos, S. Dragan, **C.C. Cormos**, *Mathematical modeling and simulation of green hydrogen production by sorption enhanced reforming process, using biogas as feedstock*, 19-th Conference on Sustainable Development of Energy, Water and Environment Systems (SDEWES), 8 - 12 September 2024, Rome, Italy

25. V.C. Sandu, **C.C. Cormos**, A.M. Cormos, *Multiscale CFD modelling of syngas-based chemical looping combustion in a packed bed reactor with dynamic gas switching technology*, Journal of Environmental Chemical Engineering, 11, 2023, 111381
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29. L. Petrescu, S.C. Galusnyak, F.A. Grozav, A. Imre-Lucaci, **C.C. Cormos**, *Technical evaluation and comparison of various value-added products derived from glycerol*, 18-th Conference on Sustainable Development of Energy, Water and Environment Systems (SDEWES), 24 - 29 September 2023, Dubrovnik, Croatia
30. F.M. Ilea, **C.C. Cormos**, S. Dragan, A.M. Cormos, *Techno-Economic Implications of Three Phase Fluidized Bed Absorption Column Applied to Power Generation for an Intensified CO₂ Capture Process*, 18-th Conference on Sustainable Development of Energy, Water and Environment Systems (SDEWES), 24 - 29 September 2023, Dubrovnik, Croatia
31. V.C. Sandu, A.M. Cormos, A. Pop, **C.C. Cormos**, *Experimental Study and CFD Simulation of Thermal Decomposition of Dolomite for Calcination During CaL*, 18-th Conference on Sustainable Development of Energy, Water and Environment Systems (SDEWES), 24 - 29 September 2023, Dubrovnik, Croatia
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34. **C.C. Cormos**, L. Petrescu, A.M. Cormos, S. Dragan, C. Dinca, M. Sandru, *Integration of renewable energy and CO₂ capture and utilization technologies for decarbonization of energy intensive process industries*, Computer Aided Chemical Engineering, 52, 2023, 2777-2784
35. A.D. Selejan, S. Dragan, A.M. Cormos, M. Dragan, **C.C. Cormos**, *Multi-scale modeling and techno-economic analysis of biogas catalytic reforming for hydrogen & power production with CO₂ capture feature*, Computer Aided Chemical Engineering, 52, 2023, 1367-1372
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