Publication list
Prof. Dr. Eng. Cormos Calin-Cristian

1. Books

2. Articles
1. C.C. Cormos, Energy and cost efficient manganese chemical looping air separation cycle for decarbonized power generation based on oxy-fuel combustion and gasification, Energy, 2019, accepted, in press


13. C.C. Cormos, *Techno-economic evaluations of copper-based chemical looping air separation system for oxy-combustion and gasification power plants with carbon capture*, Energies, 11, 2018, 1-17


19. C. Dinca, N. Slavu, C.C. Cormos, A. Badea, *CO2 capture from syngas generated by a biomass gasification power plant with chemical absorption process*, Energy, 149, 2018, 925-936


27. C.C. Cormos, C. Dinca, L. Petrescu, A.M. Cormos, Carbon capture and utilisation technologies applied to energy conversion systems and other energy-intensive applications, 8th Clean Coal Technologies conference - CCT2017, 8 - 12 May 2017, Cagliari, Sardinia, Italy

28. L. Petrescu, C.C. Cormos, Environmental assessment of IGCC power plants with pre-combustion CO2 capture by chemical & calcium looping methods, Journal of Cleaner Production, 158, 2017, 233-244

29. S. Fogarasi, C.C. Cormos, Assessment of coal and sawdust co-firing power generation under oxy-combustion conditions with carbon capture and storage, Journal of Cleaner Production, 142, 2017, 3527-3535

30. C.C. Cormos, Chemical Looping with Oxygen Uncoupling (CLOU) concepts for high energy efficient power generation with near total fuel decarbonisation, Applied Thermal Engineering, 112, 2017, 924-931


32. L. Petrescu, M. Fermeglia, C.C. Cormos, Life Cycle Analysis applied to acrylic acid production process with different fuels for steam generation, Journal of Cleaner Production, 133, 2016, 294-303

33. C.C. Cormos, L. Petrescu, A.M. Cormos, S. Agachi, Process design and integration of various carbon capture approaches into the energy sector and other energy-intensive industrial applications, Computer Aided Chemical Engineering, 38, 2016, 265-270


39. S. Fogarasi, **C.C. Cormos**, *Technico-economic assessment of coal and sawdust co-firing power generation with CO₂ capture*, Journal of Cleaner Production, 103, 2015, 140-148


43. L. Petrescu, C.R. Müller, **C.C. Cormos**, *Life Cycle Assessment (LCA) of Integrated Gasification Combined Cycle plants with pre-combustion CO₂ capture by chemical &
calcium looping, 6th High Temperature Solid Looping Cycles Network Meeting, Milan, Italy, 1 - 2 September 2015

44. S. Fogarasi, C.C. Cormos, Clean Power Generation Based on Coal and Sawdust co-firing with Carbon Capture and Storage (CCS), 19th Romanian International Conference on Chemistry and Chemical Engineering, Sibiu, Romania, 2 - 5 September 2015

45. C.C. Cormos, A.M. Cormos, Assessment of CO₂ capture by calcium looping from Natural Gas Combined Cycle (NGCC) power plants, 18th Conference on Process Integration, Modelling and Optimisation for Energy Saving and Pollution Reduction - PRES 2015, Kuching, Sarawak, Malaysia, 23 - 27 August 2015


47. C.C. Cormos, A.M. Cormos, P.S. Agachi, Evaluation of energy integration aspects for advanced chemical looping systems applied for energy vectors poly-generation, Computer Aided Chemical Engineering, 37, 2015, 2237-2242


51. C.C. Cormos, Assessment of chemical absorption/adsorption for post-combustion CO₂ capture from Natural Gas Combined Cycle (NGCC) power plants, Applied Thermal Engineering, 82, 2015, 120 - 128


61. **C.C. Cormos**, *Techno-economic and environmental analysis of hydrogen and power co-generation based on co-gasification of coal and biomass / solid wastes with carbon capture*, Chemical Engineering Transactions, 37, 2014, 139-144


68. I.M. Bodea, **C.C. Cormos**, *Applications of chemical looping combustion to energy conversion processes*, Studia Chemia, 4, 2013, 7-22


76. **C.C. Cormos**, C. Dinca, *Assessment of mass and energy integration aspects for IGCC power plants with carbon capture and storage (CCS)*, Studia Universitatis Chemia, LVIII, 1, 2013, 117-131


115. **C.C. Cormos**, *Hydrogen and electricity co-production based on gasification process with Carbon Capture and Storage (CCS)*, Enlargement and Integration Workshop: “Clean and efficient power generation from coal”, European Commission, Gliwice, Poland, 24-25 September 2009


141. **C.C. Cormos, S. Agachi**, *Modeling and simulation of pantolactone extraction process*, 16th International Congress of Chemical and Process Engineering, Prague, Czech Republic, 22 – 26 August 2004


3. Patents


4. Research projects


3. *Demonstration of gas switching technology for accelerated scale-up of pressurized chemical looping applications*, ERANET ACT project, 2017 - 2020, Member in the research team


7. Optimizarea tehno-economică și a impactului asupra mediului a integrării tehnologiilor CCS în centralele electrice pe combustibili fosili solizi și surse energetice regenerabile (biomasă), Proiecte colaborative de cercetare aplicativa (PCCA), 2012 - 2016, Responsabil proiect din partea Universității Babeș-Bolyai

8. Producerea de hidrogen din compuși hidroxilici rezultăți ca deșeu la prelucrarea biomasei, Proiecte colaborative de cercetare aplicativa (PCCA), 2012 - 2016, Responsabil proiect din partea Universității Babeș-Bolyai

9. Sisteme inovative pentru captarea dioxidului de carbon aplicabile proceselor de conversie a energiei, ERC-like project, 2012 - 2014, Director de proiect

10. Metode inovative de captare a dioxidului de carbon prin chemical looping aplicate sistemelor de poli-generare vectori energetici decarbonizați, Idei – Proiecte de cercetare exploratorie (PCE), 2011 – 2015, Director de proiect

11. Sisteme inovative de poli-generare vectori energetici cu captarea și stocarea CO₂ pe baza proceselor de co-gazeificare a cărbunelui și resurselor energetice regenerabile (biomasă) sau a deșeurilor, CNCSIS Idei – Proiecte de cercetare exploratorie, 2009 – 2011, Responsabil proiect

12. Conceptual design of typical power plant configurations for the estimation of reference capital costs including material, Proiect realizat pentru European Commission, DG Joint Research Centre, Institute for Energy, Olanda, 2010-2011, Director de proiect

13. Analysis of hydrogen and power (HYPOGEN)-type power plant, Proiect realizat pentru European Commission, DG Joint Research Centre, Institute for Energy, Olanda, 2008, Director de proiect


15. Platforma de simulare control si testare in mecatronica CONMEC, Proiect CEEX, 2006 - 2008, Membru în echipa proiectului

16. Îmbunătățirea performanțelor tehnico-economice ale procesului de calcinare a calcarului într-un cuptor vertical prin modelarea matematică și simularea acestuia cu ajutorul calculatorului, Proiect de tip tinere echipe - CNCSIS AT, 2005 - 2006, Director de proiect
17. Îmbunătățirea performanțelor tehnico-economice și reducerea impactului asupra mediului a proceselor chimice prin modelarea matematică și simularea acestora cu ajutorul calculatorului, Proiect de tip tinere echipe - CNCSIS AT, 2006, Membru în echipa proiectului