a) lista celor maximum 10 lucrări considerate de candidat a fi cele mai relevante pentru realizările profesionale proprii;

1. **V.C. Sandu**, A.M. Cormos, C.C. Cormos, *Fuel reactor CFD multiscale modelling in syngas-based chemical looping combustion with ilmenite*, Energies, 2021, 14, 6059. DOI: https://doi.org/10.3390/en14196059 (IF 3.004)
2. S.N. Sluijter, J. Boon, J. James, S. Krishnamurthy, A. Lind, K.A. Andreassen, R. Blom, A.M. Cormos, **V.C. Sandu**, R. de Boer, *3D-Printing of adsorbents for increased productivity in carbon capture applications (3D-CAPS)*, International Journal of Greenhouse Gas Control, 2021, 112, 103512. DOI https://doi.org/10.1016/j.ijggc.2021.103512 (IF 3.738)
3. **V.C. Sandu**, A.M. Cormos, I.D. Dumbrava, A. Imre-Lucaci, R. de Boer, J. Boon, S.N. Sluijter, *Assessment of CO_2 capture efficiency in packed bed versus 3D-printed monolith reactors for SEWGS using CFD modelling*, International Journal of Greenhouse Gas Control, 2021, 111, 103447. DOI: https://doi.org/10.1016/j.ijggc.2021.103447 (IF 3.738)
4. A.M. Cormos, **V.C. Sandu**, C.C. Cormos, *Assessment of main energy integration elements for decarbonized gasification plants based on thermo-chemical looping cycles*, Journal of Cleaner Production, 2020, 259, 120834. DOI: https://doi.org/10.1016/j.jclepro.2020.120834 (IF 9.297)
5. A.M. Cormos, S. Dragan, L. Petrescu, **V.C. Sandu**, C.C. Cormos, *Techno-economic and environmental evaluations of decarbonized fossil-intensive industrial processes by reactive absorption & adsorption CO_2 capture systems*, Energies, 2020, 13, 1268. DOI: https://doi.org/10.3390/en13051268 (IF 3.004)
6. **V.C. Sandu**, I. Dumbrava, A.M. Cormos, A. Imre, C.C. Cormos, P. Cobden, R. de Boer, *Modelling of a rectangular channel monolith reactor for sorption-enhanced water-gas shift*, Environmental Engineering and Management Journal, 2020, 19(2), 205-217. DOI: https://doi.org/10.30638/eemj.2020.019 (IF 0.916)
7. A.C. Soit, A.M. Cormos, I. Dumbrava, **V.C. Sandu**, *Modelling and simulation of water gas shift reactor using COMSOL Multiphysics*, STUDIA UBB CHEMIA, 2019, 64(4), 19-29. DOI: https://doi.org/10.24193/subbchem.2019.4.02 (IF 0.447)
8. **V.C. Sandu**, A.M. Cormos, C.C. Cormos, *Assessment of various water-gas shift process configurations applied to partial oxidation energy conversion processes with carbon capture*, STUDIA UBB CHEMIA, 2019, 64(2), 371-381. DOI: https://doi.org/10.24193/subbchem.2019.2.31 (IF 0.447)

b) teza sau tezele de doctorat;

1. Teză de doctorat în domeniul ingineriei chimice cu titlul în limba română, respectiv limba engleză: "*Aplicații de modelare matematică pentru sistemele termo-chimice gaz-solid de conversie a energiei cu captarea dioxidului de carbon*", "*Modelling approaches for thermo-chemical gas-solid systems applied to energy conversion processes with carbon dioxide capture*".

c) brevete de invenţie şi alte titluri de proprietate industrială;

Nu este cazul.

d) cărţi şi capitole în cărţi;

Nu este cazul.

e) articole/studii, publicate în reviste din fluxul ştiinţific internaţional principal;

1. **V.C. Sandu**, A.M. Cormos, C.C. Cormos, *Fuel reactor CFD multiscale modelling in syngas-based chemical looping combustion with ilmenite*, Energies, 2021, 14, 6059. DOI: https://doi.org/10.3390/en14196059 (IF 3.004)
2. S.N. Sluijter, J. Boon, J. James, S. Krishnamurthy, A. Lind, K.A. Andreassen, R. Blom, A.M. Cormos, **V.C. Sandu**, R. de Boer, *3D-Printing of adsorbents for increased productivity in carbon capture applications (3D-CAPS)*, International Journal of Greenhouse Gas Control, 2021, 112, 103512. DOI https://doi.org/10.1016/j.ijggc.2021.103512 (IF 3.738)
3. **V.C. Sandu**, A.M. Cormos, I.D. Dumbrava, A. Imre-Lucaci, R. de Boer, J. Boon, S.N. Sluijter, *Assessment of CO_2 capture efficiency in packed bed versus 3D-printed monolith reactors for SEWGS using CFD modelling*, International Journal of Greenhouse Gas Control, 2021, 111, 103447. DOI: https://doi.org/10.1016/j.ijggc.2021.103447 (IF 3.738)
4. A.M. Cormos, **V.C. Sandu**, C.C. Cormos, *Assessment of main energy integration elements for decarbonized gasification plants based on thermo-chemical looping cycles*, Journal of Cleaner Production, 2020, 259, 120834. DOI: https://doi.org/10.1016/j.jclepro.2020.120834 (IF 9.297)
5. A.M. Cormos, S. Dragan, L. Petrescu, **V.C. Sandu**, C.C. Cormos, *Techno-economic and environmental evaluations of decarbonized fossil-intensive industrial processes by reactive absorption & adsorption CO_2 capture systems*, Energies, 2020, 13, 1268. DOI: https://doi.org/10.3390/en13051268 (IF 3.004)
6. **V.C. Sandu**, I. Dumbrava, A.M. Cormos, A. Imre, C.C. Cormos, P. Cobden, R. de Boer, *Modelling of a rectangular channel monolith reactor for sorption-enhanced water-gas shift*, Environmental Engineering and Management Journal, 2020, 19(2), 205-217. DOI: https://doi.org/10.30638/eemj.2020.019 (IF 0.916)

7. A.C. Soit, A.M. Cormos, I. Dumbrava, **V.C. Sandu**, *Modelling and simulation of water gas shift reactor using COMSOL Multiphysics*, STUDIA UBB CHEMIA, 2019, 64(4), 19-29. DOI: https://doi.org/10.24193/subbchem.2019.4.02 (IF 0.447)
8. **V.C. Sandu**, A.M. Cormos, C.C. Cormos, *Assessment of various water-gas shift process configurations applied to partial oxidation energy conversion processes with carbon capture*, STUDIA UBB CHEMIA, 2019, 64(2), 371-381. DOI: https://doi.org/10.24193/subbchem.2019.2.31 (IF 0.447)

f) publicaţii in extenso, apărute în lucrări ale principalelor conferinţe internaţionale de specialitate;

1. S.N. Sluijter, J. Boon, J. James, S. Krishnamurthy, A. Lind, K.A. Andreassen, R. Blom, A.M. Cormos, **V.C. Sandu**, R. de Boer, *3d-Printing of adsorbents for increased productivity in carbon capture applications (3d-CAPS)*, Proceedings of the 15th Greenhouse Gas Control Technologies Conference (GHGT-15), 2021. DOI: http://dx.doi.org/10.2139/ssrn.3811591
2. **V.C. Sandu**, A.M. Cormos, C.C. Cormos, *Dynamic simulation of chemical looping combustion in packed bed reactors*, Computer Aided Process Engineering (ESCAPE), 2020, 48, 601-606. DOI: https://doi.org/10.1016/B978-0-12-823377-1.50101-4
3. **V.C. Sandu**, I. Dumbrava, A.M. Cormos, A. Imre, C.C. Cormos, P. Cobden, R. de Boer, *Computational fluid dynamics of rectangular monolith reactor vs. packed-bed column for sorption enhanced water-gas shift*, Computer Aided Process Engineering (ESCAPE), 2019, 46, 751-756. DOI: https://doi.org/10.1016/B978-0-12-818634-3.50126-0
4. A.M. Cormos, S. Dragan, L. Petrescu, D.A. Chisalita, S. Szima, **V.C. Sandu**, C.C. Cormos, *Reducing carbon footprint of energy-intensive applications by CO_2 capture technologies: An integrated technical and environmental assessment*, Chemical Engineering Transactions, 2019, 76, 1033-1038. DOI: https://doi.org/10.3303/CET1976173

g) alte lucrări şi contribuţii ştiinţifice sau, după caz, din domeniul creaţiei artistice.

Nu este cazul.