

PERSONAL INFORMATION



**DRAGAN SIMION**

📍 Sextil Puscariu 3/3, Cluj-Napoca, 400111, Romania  
 ☎ (+40 ) 0264-593833 (5663) 📠 0751238077  
 ✉ simion.dragan@ubbcluj.ro

Sex Male | Date of birth 16/10/1963 | Nationality Romanian

WORKPLACE

Babes-Bolyai University of Cluj-Napoca, Mihail Kogalniceanu Str., Nr. 1, Cluj-Napoca, RO-400084

POSITION

Associate Professor

WORK EXPERIENCE

<p>Dates</p> <p>Occupation or position held</p> <p>Main activities and responsibilities</p> <p>Name and address of the employer</p> <p>Sector</p>	<p>15/03/2007 →</p> <p>Associate professor within the Department of Chemical Engineering</p> <p>Transfer phenomena and unit operations within the chemical industry, Heterogeneous gas-liquid and gas-solid chemical process engineering, Mass transfer with/without chemical reaction and specific equipment</p> <p>Babes-Bolyai University of Cluj-Napoca, Mihail Kogalniceanu Str., Nr. 1 RO - 400084, Cluj-Napoca, Tel: 40-264-40.53.00</p> <p>Education</p>
<p>Dates</p> <p>Occupation or position held</p> <p>Main activities and responsibilities</p> <p>Name and address of the employer</p> <p>Sector</p>	<p>25/01/1999 - 15/03/2007</p> <p>Lecturer within the Department of Chemical Engineering</p> <p>Transfer phenomena and unit operations within the chemical industry, Heterogeneous gas-liquid and gas-solid chemical process engineering, Mass transfer with/without chemical reaction and specific equipment</p> <p>Babes-Bolyai University of Cluj-Napoca, Mihail Kogalniceanu Str., Nr. 1 RO - 400084, Cluj-Napoca, Tel: 40-264-40.53.00</p> <p>Education</p>
<p>Dates</p> <p>Occupation or position held</p> <p>Main activities and responsibilities</p> <p>Name and address of the employer</p> <p>Sector</p>	<p>01/09/1992 - 25/01/1999</p> <p>Assistant professor within the Department of Chemical Engineering</p> <p>Transport and transfer phenomena (Momentum, heat and mass transfer)</p> <p>Babes-Bolyai University of Cluj-Napoca, Mihail Kogalniceanu Str., Nr. 1 RO - 400084, Cluj-Napoca, Tel: 40-264-40.53.00</p> <p>Education</p>
<p>Dates</p> <p>Occupation or position held</p> <p>Main activities and responsibilities</p>	<p>01/03/1991 - 01/09/1992</p> <p>Chemical Engineer</p> <p>Teaching and research</p>

Name and address of the employer Babes-Bolyai University of Cluj-Napoca, Mihail Kogalniceanu Str., Nr. 1  
RO - 400084, Cluj-Napoca, Tel: 40-264-40.53.00

Sector Education

Dates 04/10/1988 - 01/03/1991

Occupation or position held Chemical Engineer

Main activities and responsibilities Inorganic chemical processes

Name and address of the employer Tarnaveni chemical plant

Sector Chemical industry

## EDUCATION AND TRAINING

Dates 25/09/1994 - 02/11/2002

Qualification awarded PhD

Name and type of educational institution/training provider "Gheorghe Asachi" Technical University of Iasi, Romania

Dates 15/09/1983 - 01/07/1988

Qualification awarded Chemical Engineer

Name and type of educational institution/training provider "Gheorghe Asachi" Technical University of Iasi, Romania

Dates 15/09/1978 - 01/07/1982

Qualification awarded High school graduate

Name and type of educational institution/training provider "Andrei Muresanu" High School, Bistrita, Romania

## PERSONAL SKILLS

Mother tongue(s) Romanian

Other languages	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interactions	Spoken production	
German	B2	B2	B2	B2	B2
English	B2	B2	B2	B2	B2

Levels: A1/2: Basic user - B1/2: Independent user - C1/2: Proficient user  
Common European Framework of Reference for Languages

Communication skills

- Worked in several national and international teams at both, high school and university
- Team-oriented personality
- Experience in the field of teaching, and research work with the students.

- |                    |   |
|--------------------|---|
| Job-related skills | <ul style="list-style-type: none"> <li>▪ Expertise in Transfer phenomena and Unit operations within chemical industry</li> <li>▪ Heterogeneous gas-liquid and gas-solid chemical process engineering</li> <li>▪ Modelling and research of chemical processes and environmental protection technologies</li> </ul> |
| Computer skills    | <ul style="list-style-type: none"> <li>▪ Microsoft Office</li> </ul>  |
| Driving license    | <ul style="list-style-type: none"> <li>▪ Category B</li> </ul>  |

## ADDITIONAL INFORMATION

- |                             |   |
|-----------------------------|---|
| Postgraduate qualifications | <ul style="list-style-type: none"> <li>▪ 1994 Technical University of Bratislava, Training course “Chemical Reaction Engineering” through TEMPUS program (25 March – 2 April)</li> <li>▪ 1998 Technical University of Frankfurt, Individual mobility through IMG - TEMPUS program (15 February – 26 April)</li> <li>▪ 1998 Technical University of Vienna, Institute of Chemical Engineering and Environmental Protection (1 June – 1 July)</li> <li>▪ 1998 Technical University of Vienna, Institute of Chemical Engineering and Environmental Protection (1 October – 31 January)</li> <li>▪ 2002 Technical University of Berlin, Institute of Chemical Engineering and Thermodynamics (1 July – 1 September)</li> <li>▪ 2004 Friedrich Alexander University of Erlangen-Nuremberg, Institute of Chemical Engineering and Thermodynamics (15 June – 1 September)</li> <li>▪ Frederick University Nicosia, Cyprus, 01.-30 June 2023 – Research Stage – eUMaP Marie Skłodowska-Curie Actions (MSCA), Professor Paris Fokaides</li> </ul>  |
| Books                       | <ul style="list-style-type: none"> <li>▪ Transfer Phenomena and Equipment for Chemical Industry, A. Ghirisan and S. Dragan, Risoprint, Cluj-Napoca, 2009, 139 pag.</li> <li>▪ Studies in Gas-Liquid and Non-catalytic Gas-Solid Chemical Processes, S. Dragan and I. Siminiceanu, Risoprint, Cluj-Napoca, 2006, 284 pag.</li> <li>▪ Principles of Chemical Engineering Processes. S. Dragan, “Babes-Bolyai” University of Cluj-Napoca, Cluj-Napoca, 2004, 250 pag.</li> <li>▪ Transfer Phenomena and Equipment of Food Process Engineering, V. Gherman and S. Dragan, University of Agriculture, Cluj-Napoca, 1999, 182 pag.</li> <li>▪ Phenomena with Momentum Transfer. Problems. A. Ghirisan, S. Dragan and R. Misca, “Babes-Bolyai” University of Cluj-Napoca, Cluj-Napoca, 1996, 193 pag.</li> <li>▪ Transfer Phenomena and Equipment for Chemical Industry - Heat Transfer. L. Literat, R. Misca, Al. Ozunu and S. Dragan, “Babes-Bolyai” University of Cluj-Napoca, Cluj-Napoca, 1995, 136 pag.</li> </ul>   |
| Publications                | <ul style="list-style-type: none"> <li>▪ Development of a multi-scale mathematical model for green hydrogen production via biogas steam reforming process, Alessandra-Diana Selejan, Hannelore Lisei, Ana-Maria Cormos, Simion Dragan, Calin-Cristian Cormos, International Journal of Hydrogen Energy, 2023, In-press.</li> <li>▪ Dynamic modelling assessment of CO<sub>2</sub> capture process using aqueous ammonia, Simion Dragan, Hannelore Lisei, Flavia-Maria Ilea, Alexandru-Constantin Bozonc, Ana-Maria Cormos, Energies, 2023, vol. 16, pp. 4337.</li> <li>▪ Integration of renewable energy and CO<sub>2</sub> capture and utilization technologies for decarbonization of energy intensive process industries, Calin-Cristian Cormos, Letitia Petrescu, Ana-Maria Cormos, Simion Dragan, Cristian Dinca, Marius Sandru, Computer Aided Chemical Engineering, 2023, vol. 52, pp. 2777-2784.</li> <li>▪ Performance analysis of three-phase fluidized bed absorber for CO<sub>2</sub> capture industrial application, Flavia-Maria Ilea, Ana-Maria Cormos, Simion Dragan, Calin-Cristian Cormos, Computer Aided Chemical Engineering, 2023, vol. 52, pp. 1693-1698.</li> <li>▪ Multi-scale modeling and techno-economic analysis of biogas catalytic reforming for hydrogen &amp; power production with CO<sub>2</sub> capture feature, Alessandra-Diana Selejan, Simion Dragan, Ana-Maria Cormos, Mihaela Dragan, Calin-Cristian Cormos, Computer Aided Chemical Engineering, 2023, vol. 52, pp. 1367-1372.</li> <li>▪ Assessment of turbulent contact absorber hydrodynamics with application in carbon capture, Flavia-Maria Ilea, Ana-Maria Cormos, Simion Dragan, Calin-Cristian Cormos, Chemical Engineering Journal, 2022, vol. 449, pp. 137674.</li> <li>▪ Dynamic modelling of CO<sub>2</sub> absorption process using hollow-fiber membrane contactor in MEA solution, Alexandru-Constantin Bozonc, Ana-Maria Cormos, Simion Dragan, Cristian Dinca, Calin-Cristian Cormos, Energies, 2022, vol. 15, pp. 7241.</li> </ul> |

- Assessment of CO<sub>2</sub> utilization technologies into valuable C<sub>1</sub> organic chemicals: a modelling and simulation analysis, Stefan Cristian Galusnyak, Ionela-Dorina Dumbrava, Letitia Petrescu, Simion Dragan, Calin-Cristian Cormos, Chemical Engineering Transactions, 2022, vol. 94, pp. 397-402.
- Assessment of flexible thermochemical energy conversion and storage system based on chemical looping combustion, Calin-Cristian Cormos, Simion Dragan, Ana-Maria Cormos, Letitia Petrescu, Chemical Engineering Transactions, 2022, vol. 94, pp. 25-30.
- Economic assessment of green hydrogen production from biomass gasification with chemical absorption and membrane-based CO<sub>2</sub> capture, Calin-Cristian Cormos, Mihaela Dragan, Cristian Dinca, Ana-Maria Cormos, Simion Dragan, Ionela-Dorina Dumbrava, Flavia-Maria Ilea, Stefan Cristian Galusnyak, Chemical Engineering Transactions, 2022, vol. 94, pp. 277-282.
- Techno-economic assessment of decarbonized biogas catalytic reforming for flexible hydrogen and power production, Calin-Cristian Cormos, Ana-Maria Cormos, Letitia Petrescu, Simion Dragan, Applied Thermal Engineering, 2022, vol. 207, pp. 118218.
- Integration of membrane technology for decarbonization of gasification power plants: A techno-economic and environmental investigation, Ana-Maria Cormos, Simion Dragan, Calin-Cristian Cormos, Applied Thermal Engineering, 2022, vol. 205, pp. 118078.
- Evaluation of Calcium Looping Cycle as a Time-flexible CO<sub>2</sub> Capture and Thermo-Chemical Energy Storage System, Calin-Cristian Cormos, Simion Dragan, Ana-Maria Cormos, Letitia Petrescu, Ionela-Dorina Dumbrava, Vlad-Cristian Sandu, Chemical Engineering Transaction, 2021, vol. 88, pp.19-24.
- Techno-economic and environmental assessment of flexible operation for decarbonized supercritical power plants using reactive gas-liquid absorption, Ana-Maria Cormos, Simion Dragan, Calin-Cristian Cormos, Applied Thermal Engineering, 2021, 197, pp.1-14.
- Dynamic modeling of a three-phase gas-solid-liquid fluidized bed absorber for CO<sub>2</sub> capture, Ana-Maria Cormos, Flavia-Maria Ilea, Simion Dragan, Computer Aided Chemical Engineering, 2021,50, pp. 1087-1092.
- Mixture of graphene oxide/phosphoric acid/melamine as coating for improved fire protective performance and enhancement of surface electrical properties on wood chipboard, L.C. Cotet, C. Cadar, A. Mihis, K. Magyari, M. Muresan-Pop, L.C. Pop, A. Mihaila, I. Szekely, S. Dragan, M. Dudescu, I. Zgura, E. Matei, M. Baia, M. Baibarac, I. Anghel, L. Baia, J. Nanosci. Nanotechnol., 2021, 21(4), pp.2312-2322.
- Assessment of mass transfer intensification potential for a CO<sub>2</sub> capture process using three-phase fluidized bed, Flavia-Maria Ilea, Simion Dragan, Ana-Maria Cormos, Chemical Engineering and Processing – Process Intensification, 2020, 157, pp.1-11.
- Techno-economic and environmental evaluations of decarbonized fossil-intensive industrial processes by reactive absorption & adsorption CO<sub>2</sub> capture systems, A.M. Cormos, S. Dragan, L. Petrescu, V. Sandu, C.-C Cormos, Energies, 2020, 13 (5), 1268.
- Modelling of the sugar beet pulp drying process, A. Ghirişan, S. Drăgan, C. Coţa, E.M. Nagy, G. Zoltan, V. Miclăuş, Studia Universitatis Babes-Bolyai, Chemia, 2020, 65 (2), pp.21-28.
- Determining the Effective Mass Transfer Area in Three-Phase Fluidized Bed with Low Density Inert Solids, S. Drăgan, Rev.Chim, 2019, vol.70, No.11, pp.4040-4046.
- Kinetic Study of Sulfur Dioxide Absorption into Dolomite-Brucite Suspensions, S. Drăgan, A. Miclăuş (Ghirişan), Studia Universitatis Babes-Bolyai, Chemia, 2019, vol.64 (2), pp.345-355.
- Mathematical modeling of steam methane reforming process, S.C. Galusnyak, S. Drăgan, Studia Universitatis Babes-Bolyai, Chemia, 2019, vol.64 (4), pp.7-18.
- Reducing Carbon Footprint of Energy-Intensive Applications by CO<sub>2</sub> Capture Technologies: An Integrated Technical and Environmental Assessment, A.-M. Cormos, S. Dragan, L. Petrescu, D.-A. Chisalita, S. Szima, C.V. Sandu, C.-C. Cormos, Chemical Engineering Transactions, 2019, vol.76, pp.1033-1038.
- Macrokinetic Investigations of Dry Flue-Gas Desulfurization Process Using TGA Technique, S. Drăgan, Studia Universitatis Babes-Bolyai, Chemia, 2018, vol.63 (3), pp.59-72.
- The Influence of Temperature and Dolomite Addition on the Drying Kinetics of Sugar Beet Pulp (*Beta Vulgaris* L.), A. Ghirişan, S. Drăgan, C. Coţa, N. Cioica, E.-M. Nagy, V. Miclăuş, Studia Chemia, 2018, vol.63 (2), pp 53-62.
- Experimental Study of Sulfur Dioxide Absorption into Carbonate Suspensions with Sulfites Addition, S. Drăgan, Studia Universitatis Babes-Bolyai, Chemia, 2017, vol.62 (4), pp.293-307.
- Freeze-Drying Kinetics Approach of Soluble Coffee. Mass Transfer Parameters Estimation, A. Ghirişan, S. Drăgan, Studia Universitatis Babes-Bolyai, Chemia, 2017, vol.62 (1), pp.7-17.
- Hydrodynamic parameters of gas-solid-liquid three phase fluidized bed with low density solids, S. Drăgan, A. Ghirişan, Rev.Chim, 67, No.5, 2016.
- A macrokinetic study of the oxidation of methanol to formaldehyde on Fe<sub>2</sub>O<sub>3</sub>-MoO<sub>3</sub> oxide catalyst, S. Drăgan, I. Kulic, Studia Universitatis Babes-Bolyai, Chemia, 2016, vol.61 (2), pp.155-166.

- Evaluation of mass transfer parameters for urea dissolution in fixed-bed with downward flow of water, S. Fogarasi, F. Imre-Lucaci, S. Drăgan, A. Imre-Lucaci, *Studia Universitatis Babes-Bolyai, Chemia*, 2016, vol.61 (3), pp.495 -504.
- Calculation of the effective mass transfer area in turbulent contact absorber, S. Drăgan, *Studia Universitatis Babes-Bolyai, Chemia*, 2016, vol.61 (3), pp.227 -238.
- Hydrodynamic Characterization of Three Phase Fluidized Bed, S. Drăgan, *Studia Universitatis Babes-Bolyai, Chemia*, 2015, vol.60 (3), pp.183-191.
- Kinetic Analysis of Thermal Decomposition of the Limestone and Precipitate Calcium Carbonate, S. Drăgan, *Studia Universitatis Babes-Bolyai, Chemia*, 2013, vol.58 (4), pp.53-62.
- Kinetic Study of Carrots Drying, A. Ghirisan, S. Drăgan, *Studia Universitatis Babes-Bolyai, Chemia*, LVIII(2), 2013, pp.35-42.
- Kinetics of Carbon Dioxide Absorption into New Amine Solutions, R.-E. Tataru-Farmus, M. Drăgan, S. Drăgan, I. Siminiceanu, *Studia Universitatis Babes-Bolyai, Chemia*, vol.58 (4), pp.113-117.
- Characterization of Hindered Settling in Concentrated Solid-Liquid Suspensions, A. Ghirişan, S. Drăgan, *Studia Universitatis Babes-Bolyai, Chemia*, 2012, vol.LVII (3), pp.241-248.
- Characterization of calcium carbonates used in wet flue gas desulphurization processes, S. Drăgan, Al. Ozunu, *Centr. Eur. J.Chem*, 2012, vol. 10 (5), pp.1556-1564.
- Sedimentation of Concentrated Suspensions in Non-Newtonian Fluids, A. Ghirişan, S. Drăgan, *Studia Universitatis Babes-Bolyai, Chemia*, 2011, LVI(2), pp.115-124.
- Experimental Study of Sulfur Dioxide Absorption into Calcium Carbonate Suspensions, S. Drăgan, A. Ghirişan, *Studia Universitatis Babes-Bolyai, Chemia*, 2011, LVI(4), pp.143-152.
- The influence of coagulants in colloidal particles removal from dispersions, A. Ghirişan, S. Drăgan, *Studia Universitatis Babes-Bolyai, Chemia*, 2010, LV(2), pp.145-154.
- Kinetic study of flue gas desulphurization with sodium carbonate at low temperature, S. Drăgan, A. Ghirişan, *Studia Universitatis Babes-Bolyai, Chemia*, 2010, LV(2), pp.283-292.
- Removal of Some Estrogenic Pollutants from Water by Adsorption, A. Ghirişan, S. Drăgan, C. Cimpoiu, C. Roman and V. Miclăuş, *Chem. Bull.*, 2008, 53(67), 1-2, pp.61-64.
- Copper biosorption on a strain of *Saccharomyces cerevisiae* isotherm. Equilibrium and kinetic study, A. Ghirişan, S. Drăgan and V. Miclăuş, *Studia Universitatis Babes-Bolyai, Chemia*, 2008, vol.53 (3), pp.37-45
- Crystallization under supercritical conditions in aerogels, B.S.K. Gorle, I. Smirnova, S. Drăgan, M. Drăgan, W. Artl, *The Journal of Supercritical Fluids*, 2008, 44, pp.78-84.
- Kinetic study of calcination for precipitate calcium carbonate, S. Drăgan, A. Ghirişan, *Studia Universitatis Babes-Bolyai, Chemia*, 2007, vol. LII (4), pp.165-173.
- Heavy metal removal and neutralization of acid mine waste water - Kinetic study, A. Ghirişan, S. Drăgan, A. Pop, M. Simihăian and V. Miclăuş, *The Canadian Journal of Chemical Engineering*, 2007, 85, pp.900-905.
- Study of the dry flue gas desulphurization by calcined limestone, I. Siminiceanu, S. Drăgan, A. Friedl, M. Harasek, *Environmental Engineering and Management Journal*, 2006, Vol.5, No.3, pp.433-443.
- Studies on the Natrium Sulphate salting-out crystallization.I. Crystallization Kinetics, Al. Pop, Adina Ghirişan, S. Drăgan and V. Miclăuş, *Studia Universitatis Babes-Bolyai, Chemia*, vol.51 (1), 2006, pp.115-126.
- Theoretische Beschreibung Der Kristallisation Aus Überkritischen Gasen Im Porösen Matrix, S. Drăgan, M. Drăgan, *Studia Universitatis Babes-Bolyai, Chemia*, vol.50 (2), 2005, pp.75-88.
- Experimental Study of Dry Desulphurization with Calcium Oxide. Characterization of Calcium Oxide Structure, S. Drăgan, M. Drăgan, *Studia Universitatis Babes-Bolyai, Chemia*, vol.50 (2), 2005, pp.89-96.
- Beschreibung Des Hydrodinamischen Modells Des Druckverlustes Durch Eine Katalysatorschicht, A. Pop, A. Ghirişan, S. Drăgan und V. Miclăuş, *Studia Universitatis Babes-Bolyai, Chemia*, vol.50 (2), 2005, pp.105-111.
- Studies on the Natrium Sulphate salting-out crystallization.I. Equilibrium of the crystallization, Al. Pop, A. Ghirişan, S. Drăgan and V. Miclăuş, *Studia Universitatis Babes-Bolyai, Chemia*, vol.49 (2), 2004, pp.195-201.
- Kinetics study of dry desulfurization gases with lime. Experimental Data. S. Drăgan, I. Siminiceanu, *Rev. de Chimie* Nr.11, 2004, pp.857-861.
- Mathematical modelling and kinetic parameters identification, S. Drăgan, I. Siminiceanu. *Rev.de Chimie*, Nr.12, 2004, pp.952-956.



- The solubility of drugs in supercritical CO<sub>2</sub> and the effect of entrainers, S. Drăgan, M. Drăgan, *Studia Universitatis Babes-Bolyai, Chemia*, vol.48 (1), 2003, pp.191-200.
- Gas cleaning in absorption columns with Mellapak packing, I. Siminiceanu, M. Drăgan, S. Drăgan, *Analele Univ. din Oradea, Fascicola X*, 2003, pp.109-121.
- Gas Cleaning Technology. Influence of the lime specific surface area on the desulfurization reaction of gases, S. Drăgan, M. Drăgan, I. Siminiceanu. *Forum International*, <http://forumware.wu-wien.ac.at>, ISSUE 1, 2003, pp.18-23.
- Mass transfer intensification with Mellapak 750Y structured packing, I. Siminiceanu, A. Friedl, M. Harasek, M. Drăgan, S. Drăgan, *Chem.-Ing.-Techn.*, 73, 6, 2001, pp.677.
- The hydrodynamic of three-phase fluidized bed with low density solids, A.Pop, S. Drăgan, C. Botar, A. Batiñaș, *Studia Universitatis Babes-Bolyai, Chemia*, vol.46,1-2, 2001, pp.229-237.
- Influence of specific surface area on the reaction of lime with SO<sub>2</sub>, S. Drăgan, I.Siminiceanu, *Studia Universitatis Babes-Bolyai, Chemia*, vol.46, 1-2, 2001.pp.295-308.
- Hydrodynamic study of columns equipped with Mellapak 750 Y structured packing, I.Siminiceanu, M. Drăgan, S. Drăgan, *Rev. de Chimie* vol. Nr.5, 2000, pp.376-384.
- Characterisation of Mellapak 750Y structured packing determining the effective mass transfer area, M. Drăgan, S. Drăgan, and I. Siminiceanu, *Studia Universitatis Babes-Bolyai, Chemia*, vol.44 (1-2), 2000, pp.11-22.
- A new fluid-dynamic model of the absorption columns with structured packing , I. Siminiceanu, M. Drăgan, S. Drăgan, *Ovidius University Annals of Chemistry*, vol. 11, Number 1 (2000), pp.123-125.
- Modelling of Dry Injection Process for FGD, I. Siminiceanu, S. Drăgan, A. Friedl, M. Harasek, *Bul.Sci. Univ. Polyt. Timisoara (English Edition)*, Chem. 2000, 45/59, (1), pp.115-125.
- Macrokinetics of flue gas desulfurization by the reaction with calcined limestone, I. Siminiceanu, S. Drăgan, A. Friedl, M. Harasek, M. Drăgan, *Ovidius University Annals of Chemistry*, vol. 11, Number 1 (2000), pp.126-128.
- Charakterisierung der maximalen Leistungsfähigkeit einer Schüttung zur Erhöhung der Effizienz von Umwelttechnologien. Teil I. Abschätzung der Qualität von strukturierten Schüttungen über die spezifische Austauschfläche, M.Drăgan, S. Drăgan, A. Nemes, *Internationale Gesellschaft für Warenwissenschaften, und Technologie. Forum – Ware 28* (2000), Nr.1-4 pp.36-41.
- Charakterisierung der maximalen Leistungsfähigkeit einer Schüttung zur Erhöhung der Effizienz von Umwelttechnologien. Teil II. Die Bestimmung von hydrodynamischen Höchstleistungen. M. Drăgan, S. Drăgan, A.Nemes, *Internationale Gesellschaft für Warenwissenschaften und Technologie, Forum-Ware 28* (2000), Nr.1-4, pp. 41-44.
- Kinetic studies in the reaction between sodium carbonate and calcium sulphate, Al.Pop, I.Siminiceanu, S.Drăgan, M. Drăgan, *Rev.de Chimie*, 1999, Nr.3, pp.134 -140.
- Pressure drop and hold – up of absorption columns with structured packing, I Siminiceanu, M. Drăgan, S. Drăgan, *Bul.Inst.Polyt.lasi*, 45, (1-2), 1999, pp.31-43.
- Kinetics study of flue gas desulfurization by dry injection process, I. Siminiceanu, S. Drăgan, M. Drăgan, *Buletinul Institutului Politehnic din Iasi, Tomul XLV(IL), Fasc. 3-4*, 1999, pp.25-37.
- Pressure drop in absorption columns equipped with structured packing Siminiceanu I., M. Drăgan , A. Friedl, M. Harasek, S. Drăgan, *Science Technol.Envion.Protection*, vol. 6, (1), 1999, pp.31-44.
- On the kinetics of flue gas desulfurization by dry injection process, I. Siminiceanu., S. Drăgan., Friedl A. Harasek, M. Drăgan, *Science Technol.Envion.Protection*, vol. 6, (2), 1999, pp.34-47.
- Aspects about the oxidation of Fe<sup>2+</sup> with air, in presence of thensioactive agents, S. Drăgan, R. Mișca, Al. Ozunu, *Rev.de Chimie*, vol.49, Nr.10, 1998, pp.729-732.
- Thermogravimetric study of the sulfur dioxide reaction with lime, S. Drăgan, A. Friedl, M. Harasek, M. Drăgan and I. Siminiceanu, *Studia Universitatis Babes-Bolyai, Chemia*, vol.43 (1-2), 1998, pp.149-160.
- Hydrodynamic study of a new type of structured packing Mihaela Dragan, S. Drăgan and I.Siminiceanu, *Studia Universitatis Babes-Bolyai, Chemia*, vol.43 (1-2), 1998, pp.69-82.
- The applying of organic absorbents in the absorption of sulphur dioxide using a column of liquid film type, J.Vodnar, S. Drăgan, M. Drăgan, *Studia Universitatis Babes-Bolyai, Chemia*, vol.42 (1-2), 1997, pp.199-205.
- The study of chemical reactions, absorption and extraction, using apparatuses with serpentine pipe for pelliclizing-bubbling. IX. The thermal and initiated hydroperoxidation of p-diisopropylbenzene. J. Vodnar, Al. Chiș, A. Biro, S. Bekassy, S. Drăgan, M. Drăgan, *Studia Universitatis Babes-Bolyai, Chemia*, vol.42(1-2) 1997, pp.207-214.
- Experimental aspects about the liquid-solid extraction, R.Mișca, S. Drăgan, Al. Ozunu, *Rev.de Chimie*, vol.48, Nr.7, 1997, pp.755-760.

## Volumes

- The kinetic study of desulphurisation process of gaseous with calcium oxide, S.Drăgan, Rev.de Chimie, vol.48, Nr.4, 1997, pp.321-325.
- The Kinetic of Solid-Liquid Extraction, R. Mișca, A. Ghirișan, Al. Ozunu, S. Drăgan, Studia Universitatis Babes-Bolyai, Chemia, vol. 41 (1), 1996, pp. 55-60.
- An Experimental Technique for Measuring Diffusion Coefficients in Porous Solids, R. Mișca, Al. Ozunu, A. Ghirișan and S. Drăgan, Studia Universitatis Babes-Bolyai, Chemia, 1994, 1-2, pp.194-200.
- Mass Transfer Coefficients at Fe+2 Oxidation to Fe+3, R. Mișca, Al. Ozunu, S. Drăgan, A. Ghirișan, Studia Universitatis Babes-Bolyai, Chemia, 1994, (1-2), pp.188-194.
- Application of Carbonate Looping Cycle as an Energy-efficient Decarbonization Process of Key Fossil-intensive Industrial Applications, Calin-Cristian Cormos; Simion Dragan; Ana-Maria Cormos; Letitia Petrescu; Vlad-Cristian Sandu; Ionela-Dorina Dumbrava, Stefan Galusnyak; 10th International Conference on ENERGY and ENVIRONMENT (CIEM), 2021, 14-15 oct, Bucharest, Romania
- Assessment of chemical & calcium looping technologies as promising carbon capture options applied to energy intensive industrial applications, C.-C. Cormos, S. Dragan, L. Petrescu, D.-A. Chisalita, S. Szima, A.-M. Cormos, 10-th World Congress of Chemical Engineering-WCCE10, Barcelona, Spain, 1-5 October, 2017.
- Determination of the optimum parameters for the simultaneous synthesis & crystallization of KH<sub>2</sub>PO<sub>4</sub> fertilizer, M-M. Venter, S. Dragan, A. Pop, S. Pinzaru, The 15th International Symposium "PROSPECTS FOR THE 3rd MILLENNIUM AGRICULTURE", University of Agricultural Sciences and Veterinary Medicine Cluj-Napoca, Romania, 29.09 – 01.10.2016.
- Characterization of Settling in Concentrated Solid-Liquid Separation Based on Artificial Intelligence, A. Ghirisan, C. I. Anghel, S. Dragan, Editor: J. Markoš, In Proceedings of the 41st International Conference of Slovak Society of Chemical Engineering, 2014, 863–872, ISBN: 978-80-89475-13-1.
- Food safety and quality improvement by ozonation enhancement procedures, I. Bartalis, I. Siminiceanu, M. Dragan, S. Dragan, E. Arany, International UAB-BENA Conference Environmental Engineering and Sustainable Development, Alba-Iulia, 2013.
- Removal of Xeno-estrogenic Pollutants by an Yeast *Saccharomyces Cerevisiae* Strain from Water, A. Ghirisan, S. Dragan, C. Cimpoi, C. Roman, V. Miclaus, Proceeding, 10th World Filtration Congress, 2008, I, pp.449-453.
- Use of Apatite in the acid mine wastewater treatment. Kinetic modelling, S. Dragan, A. Ghirisan, Al. Pop, M. Sanmihaiian, V. Miclaus, 33<sup>th</sup> International Conference of Slovak Society of Chemical Engineering, Tatranske Matliare, Slovakia, 2006, 113, CD- ISBN 80-227-2409-2.
- Use of apatite in the acid mine wastewater treatment, A. Ghirisan, S. Dragan, Al. Pop, M. Sanmihaiian, V. Miclaus, Zilele Academice Clujene, Cluj-Napoca, 3-5 June, 2006.
- Modelling the flue gas desulphurization by the reaction with calcined limestone, S. Dragan, A. Friedl, M. Harasek, M. Dragan, and I. Siminiceanu, SICHEM 2000, 3-6 October, 2000, pp.265-271.
- On the Kinetics of FGD by Lime, I. Siminiceanu, S. Dragan, A. Friedl, M. Harasek, M. Dragan, Scientific Session of the University "Aurel Vlaicu", Arad, 27- 28 October, 2000, pp.34-40
- Macro kinetics of sulphur dioxide reaction with calcined limestone, I. Siminiceanu, S. Dragan, A. Friedl, 2nd International Conference of the Chemical Societies of the South-Eastern European Countries on Chemical Sciences for Sustainable Development, 6-9 June, 2000, Halkidiki, Greece, pp.163.
- Kinetic study of sulphur dioxide reaction with calcined limestone, S. Dragan, M. Harasek, I. Siminiceanu, The 14th International Congress of Chemical and Process Engineering (CHISA 2000), 27-31 August 2000, Praha, Czech Republic.
- Modelling the flue gas desulphurization by the reaction with calcined limestone, S. Dragan, A. Friedl, M. Harasek, M. Dragan, and I. Siminiceanu, SICHEM 2000, 3-6 October, 2000, pp.265-271.
- Modelling the dry injection process for the flue gas desulphurization S. Dragan, A. Friedl, M. Harasek, M. Dragan, I. Siminiceanu, RICCE-11, September 30 - 2 October, 1999, Bucharest (Paper 55, section 5), CD-rom.
- Measuring the effective mass transfer area of Mellapack 750 Y structured packing, M. Dragan, A. Friedl, M. Harasek, S. Dragan, I. Siminiceanu, RICCE-11, September 30 - 2 October, 1999, Bucharest (Paper 50, section 5), CD-rom.
- Parametric investigation on the gypsum dehydration process. Investigation in a rotary drum reactor, Al. Ozunu, L. Literat, R. Misca, S. Dragan, Second International Conference on Materials and Manufacturing Technologies 10 – 13 September 1998, Technical University of Cluj-Napoca, pp.265-271.
- Macro kinetic and Mathematical Modeling of Sodium Bicarbonate Thermal Decomposition Process and Gypsum Dehydration, Al. Ozunu, L. Literat, R. Misca, S. Dragan, SICHEM '98, 20 - 23 October 1998, Bucharest, Chemical Engineering Series, pp.202-211.

- The general dimension analyses applied to the nonstationary solvating study of pure solids. R. Misca, L. Literat, Al. Ozunu, S. Dragan, SICHEM '98, 20 - 23 October 1998, Bucharest, Chemical Engineering Series pp.134-141.
- Scale-up of the rotary drum reactor. Application on the non-catalytic solid-gas processes at low temperature. Al. Ozunu, L. Literat, R. Misca, S. Dragan, SICHEM '98, 20 - 23 October 1998, Bucharest, Chemical Engineering Series pp.192-201.
- Solid-liquid extraction. The influence of parameters on the exhaustion time, R. Misca, Al. Ozunu, S. Dragan, Revista „Zilele Academice Timișene“, Ed. Mirton, Timisoara, 1995, pp.35-38.
- Monitoring System with Wireless Components for Air Pollution Generated by Industrial Plants, S.P. Agachi, I. Stoian, E. Stancel, M. Cristea, S. Dragan, O. Ghiran, D. Capatana, A. Imre, A. Ghirisan, St. Hegedus, C. Posteuca, Computed Aided Process Engineering, CAPE Forum 2005- Romania, 25 – 26 February, Cluj-Napoca. pp.143-153, ISSN 1224-7154.
- Desulfuration des fumées par injection du calcaire dans la chambre de combustion II. Modélisation mathématique, I. Siminiceanu, S. Dragan, Actes du troisième Colloque Franco-Roumain de Chimie Appliquée, 22 - 26 September. CoFrRoCA, 2004, Slanic Moldova- Bacau, Roumanie, pp.578.
- Gas Cleaning in absorption columns with structured packing, I. Siminiceanu, M. Dragan, S. Dragan, A. Friedl, M. Harasek, 4th Chemical Industry and Environment EMChE 2003, 12 - 14 February 2003, Las Palmas de Gran Canaria, Spain, Vol 2. Gas Cleaning, pp.1-9.
- Contribution concerning perfection of flue-gas desulfurization technologies using solid adsorbents, S. Dragan, M. Dragan, Proceedings of the 13th IGWT Symposium, Maribor, Slovenia, 2nd - 8th September 2001, pp.163-173.
- Mass Transfer Intensification with Mellapak 750Y Structured Packing, I. Siminiceanu, A. Friedl, M. Harasek, M. Dragan, S. Dragan, 3rd European Congress of Chemical Engineering, Nuremberg, 26 - 28 June, 2001.
- The hydrodynamic of three-phase fluidized bed with low density solids, A. Pop, S. Dragan, C. Botar-Jid, A. Batinas, 28th International Conference of Slovak Society of Chemical Engineering, 21 – 25 May, 2001.

#### Projects

- Advanced thermo-chemical systems for flexible low carbon energy production and storage (PCE) applications: PN-III-P4-ID-PCE2020-0032.
- Integrating process intensification methods with advanced regulation strategies to improve the performance of CO<sub>2</sub> capture systems (CCS): PN-III-P4-ID-PCE2020-0632.
- Developing innovative solutions for the decarbonisation of energy-intensive industrial systems through the application of carbon capture, utilization, and storage (CCS) technologies: PN-III-P4-ID-PCE-2016-0031.
- Technological study on the use of the existing plant for the production of copper sulphate from copper scrap versus the use of the existing plant for the production of copper sulphate from electrolytic copper = new copper - Contract with the economic environment 2015.
- Characteristics determination for the Budureasa brucitic limestone within desulphurization processes in coal-fired power plants - Contract with the economic environment 2014.
- Innovative carbon dioxide capture systems for the energy conversion processes - ANCS 2012.
- Convergence of university training and working life - ANPOS DRU 2009.
- Simulation, control, and testing platform in mechatronics CONMEC - CEEX 2006.
- Integrated system for assessing the spread of pollutants in running waters and estimating the impact on population health in the SEPOL area - CEEX 2005.
- Application of Silica Aerogels as Drug Carriers" Topic A/04/17675: Investigation of the Crystallization of Active Ingredients in Silica Aerogels, funded by the DAAD, at the Institute of Thermodynamics and Thermal Process Engineering, Friedrich Alexander University Nuremberg-Erlangen, Germania, 2004.
- Wireless monitoring system for pollutant emissions from economic agents WIPOL - CEEX 2003.
- Dry Flue Gas Cleaning downstream of Waste Incinerators "AE/E-(1997-1999), Subject: Investigations of Inorganic Non-catalytic Adsorption Processes with Chemical Reaction, funded by the DAAD, at the Institute for Process, Fuel and Environmental Engineering, T.U Vienna, Austria 1998-1999.

#### Patent

- Patent No. 123139 of 2010: Production process and composition for Calcium-based foliar fertilizer. Authors. Pop, V. Miclaus, R. Barabas, S. Dragan, V. Mitre, I. Mitre.