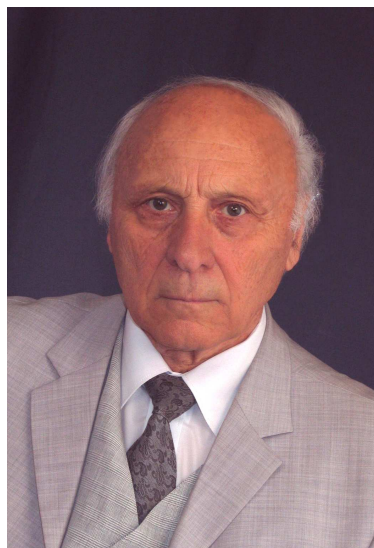


## PROFESSOR ENG. LIVIU LITERAT PHD

Professor Liviu Literat has been over 58 years in the service of chemistry and chemical engineering education at two reference Universities of Cluj-Napoca – the **Polytechnic Institute** (1953-1974) and “**Babeş-Bolyai**” **University** (1974 -). He graduated the chemical-physics (1951) in Cluj at “V. Babeş” University, the chemical engineering (1961) at Polytechnic Institute of Bucharest and became PhD in chemistry (1966). He got scientific research training (post doctoral schooling) in: Reactions in solid state (1966) – University Bucharest, Faculty of Chemistry, Department of physical-chemistry (acad. Ilie Murgulescu); Magnetic Nuclear Resonance (RMN) in Organic Chemistry (1967) – Romanian Academy Bucharest (acad. Prof. Costin D. Nenişescu) and UNESCO international training course in Scientific Research Management (Balkan Union of Mathematicians), Bucharest (1977). He also performed training in academic management, such as the Educational Management (1982) training – UBB, Cluj-Napoca, the Ministry of Education and European Foundation “J. C. Drăgan” and became coordinator of TEMPUS programs (1991-1996). Professor Literat was the **initiator and organizer of the chemical engineering education in the Cluj-Napoca University Center** by establishing the specializations: the Technology of Building Materials (1971), Organic and Inorganic Technology (1977) and the Science and Engineering of Oxide Materials (1990). He was founder and head of the Department of Chemical Engineering (1990) and founder of the Science of Oxide Materials (1992) specialization. He was also the promoter of the post-university (master) specializations (1994, 1995) and PhD advisor (1991) in chemical engineering and Science of Oxide Materials. Professor Literat was the Head of the Organic Chemistry and Technology Department (1977-1985) and of the Chemical Engineering and Science of Oxide Materials (1992-1995) chair, while he was also PhD supervisor in chemical engineering. He is author of 15 books (university manuals, treatises, monographs, history of sciences and education) and of over 130 scientific articles published in specialized journals in Romania and in foreign countries or in volumes of some international scientific events. Professor Literat is the author of over 300 scientific communications at national and international Congresses and Symposiums, of 75 applied research reports (contracts, grants, projects). He was member of the Commission of the National Council for Inventions of Engineers and Technicians (CNIT) Cluj (1985-1989). He served as active member of the editorial boards of Scientific Bulletin of Polytechnic Institute Cluj, Studia Universitatis Babeş-Bolyai, Seria Chemia and Romanian Journal of Materials (Bucharest). He is member of the Association of Scientists (AOS) of the Romanian Academy – Transylvania subsidiary (1986). He is also founding member (1995), president (1995-2000) and honorary



president (2000) of the Romanian Chemical Engineering Society (SICR) – Cluj branch. As recognition of his outstanding scientific merits he became honorary member of the Romanian Academy of Technical Sciences (2004) and member of the European Federation of Chemical Engineering (1999). He was proposed and accepted to be honorary citizen of Făgăraș Municipality (2005). Professor Literat is mentioned in numerous Romanian and foreign biographical compendiums (who's who) as scientist, culture and successful man, as teacher and mentor for over 50 series of graduate chemical, mechanical, civil engineers and university chemists and as adviser of master and PhD students. This would be, in short, the visiting card of professor dr. eng. Liviu Literat.

Born on 9 September 1928 in Vințul de Jos, Alba County, professor Liviu Literat is a descendant of an old (scholar) family promoting knowledge and national traditions (rustics, priests, teachers, professors) with deep roots in the history of Făgăraș Country, strongly attached to the culture and national traditions.

Grown up in the cult of work and of the moral precepts respect of honesty, truth and justice, he always rigorously followed these principles.

High school studies have been performed at Brașov ("Andrei Șaguna" College), 1939-1945, Făgăraș ("Radu Negru" Lyceum), 1945/46 and Cluj ("Simion Ștefan" Lyceum), 1946/47, and baccalaureate at "George Barițiu" Lyceum (1947).

He got a thorough College education at "Victor Babeș" University from Cluj, Faculty of Chemistry (1947-1951), graduated in chemical-physics (1951) and at Polytechnic Institute of Bucharest, Faculty of Industrial Chemistry (1961), became a chemical engineer, specialized in the Technology of Inorganic Substances (1963).

From the professional-scientific training perspective, Professor Liviu Literat is the product of the Chemistry School of Cluj and of the Chemical Engineering one, of Bucharest. This synthesis proved beneficial in his activity as member of the professorial staff and on a larger plan in organizing the chemical engineering education in Cluj-Napoca, a desideratum for which Professor Liviu Literat has pleaded for and has consistently acted in favor of and with which he has entirely identified himself.

In 1966 he obtained the scientific title of doctor in chemistry (PhD) with an ample research works in the field of non-stoichiometry of refractory oxides (a physical-chemistry study of some reducing alumina) performed under the guidance of academician Raluca Ripan.

The university career started as soon as his student's years, as a teaching assistant, (Department of Mineralogy, "V. Babeș" University) then he ascended all the steps of the higher education hierarchy and since 1972 he has become full professor.

Within the **Polytechnic Institute** (1953-1974) he was the titular of the General Chemistry, Inorganic and Physical-chemistry, Analytical chemistry and Technical Analysis, Building Materials and Building materials on polymer compounds disciplines.

**At the Babes-Bolyai University** he thought disciplines of chemical engineering including: Operations and Equipments in the Building Material Industry (1974-1991), Processes and Equipments in the Chemical Technology (1976-1991), Transfer Phenomena and Equipments in the Chemical Engineering (1980-1993), Heterogeneous catalysis (1977-1980), Operations and Equipments in the Oxide Materials Industry (1990-1995), Engineering of Interface Processes (1994-2001).

For these disciplines, he elaborated courses (5) and applications (7), appreciated for their content, modern approach and high level of analysis for the involved problems. Among these are the book on General Chemistry (1975) recommended by the Ministry of Education and EDP House (in 1973) as textbook for all higher technical education Institutes; Transfer Phenomena and Equipments in the Chemical Industry; Transport Processes (1985) – where the concept of Property Transport has been first introduced; Operations and Equipments in the Oxide Material Industry-Applications (1994) – example of applied theory, or in a reversed sense, inferred from the experiment and extended to the design; Technical Ceramics; Calculus and Designing Principles (2001) –synthesis of subjects and problems of theory, technology, research and designing in the ceramics domain.

Besides the didactic activity, Professor Liviu Literat has carried out a sustained and varied **scientific activity** in the fields of **physical-chemistry, chemical engineering** and **materials science**.

His formation as engineer and chemist offered to professor Literat the possibility to perform fundamental and applied research in the field of the materials science and chemical engineering, both considered as based on physical and chemical processes or phenomena.

Interested on the problems specific to each of these fields, Professor Liviu Literat and the school set up around him, have developed studies, with priority, in the competition area of these domains, situated at the border between the materials science and process engineering, at the interface between the “phenomenological” and “structural” aspects.

**In the Materials Science domain**, Professor Literat has essentials contributions to the discovery and research of a new class of refractory oxides (alumina) with deviation from stoichiometry, in the synthesis and characterization of some oxide-nano-systems and materials with pre-set destination aim, properties and characteristics (oxide refractory, metallic and composite matters with controlled porosity, ceramic membranes, catalysts, selective adsorbents, powders and sintered matters).

As concerns the alumina non-stoichiometry (reducing alumina with oxygen deficit, paramagnetic properties, n-type semiconductor behaviour and catalytic activity in electron-change processes), the PhD thesis (1964) and the publications on this subject, had a particular interests and were favorable commented in literature (reviewed by Chemical Abstract, Referativnii Zhurnal), professor Literat being considered as pioneer in this field that, later, will be called nano materials compounds and also, in the non conventional synthesis methods (organic-inorganic precursors, in special conditions).

He has developed a new technique of punctual quantitative chemical analysis of the oxide and composite micro-phases systems using the methods of the electronic microscopy (electron microprobe). A non-conventional granular analysis method of analogy based on physical metallurgy (Epiquant) has been developed, by which the dimension, shape, volume, specific surface and the distribution function of the powders size fractions are estimated automatically.

**In the field of chemical engineering**, professor Literat's interests are connected to the concept of property transport and transfer phenomena, to the dimensional analysis applied to the phenomenological study of the interface processes (sorption, catalysis, extraction), to separation processes, to thermodynamics

and kinetics in solid state reactions and catalysis, to modeling and simulation, to scale up and design of the research equipments and industrial installations.

In the transfer theory, he has determined (12) new similitude criteria and criterion equations for stationary and transitory conductive-convective processes with electric load carriers.

In the field of the separations processes, he has developed a graph-analytical procedure for the discrimination of the movement of dispersed particles in the sedimentation process, has established some news recurrence equations and nomographic charts between the sedimentation speed and the size of particles. As well, he has drawn up an experimental computerized method and technique for recording of settling curves and of the size distribution functions. In the separation of the fluid micro-dispersions by filtering, there were also studied the phenomenology of the micro and ultra filtering processes, and the separation techniques.

He brought original contributions at the gas-solid sorption processes such as theory, experiment, apparatus, computation programs and applications in gas separations and to the porous solids and powders characterization.

**In professor's Liviu Literat activity as a whole**, an important part is **played** by his constant interest and concern for **the development** of the technical higher education in Cluj-Napoca, in general, and especially for **the chemical engineering**. For this desiderate he developed a prodigious didactic and scientific – theoretical, applicative and managerial activity, with special effects.

The name of the professor Liviu Literat has been inseparably linked with the actions and initiatives of setting up, developments and advances of the chemical engineering education in Cluj-Napoca University Center for over four decades, being considered one of the founder of the fourth Romanian Chemical Engineering School (1971) after Iași (1937), Bucharest (1938) and Timișoara (1948).

Therefore, Professor Liviu Literat does not belong only to the Babeș-Bolyai University and Polytechnic Institute of Cluj, he is a prominent personality of the Romanian School of Chemical Engineering and of the Oxide Material Science, as he is, in these domains, a founder of school, and representative of the higher education, considered as a whole. In the same time, professor Liviu Literat is a personality of high morality, with a grand spirit and a great availability, always involved in the activities that he put love all along his life. Professor Liviu Literat has always been a dynamic, active and dedicated person; he has presented to the higher education with everything he has to give, with responsibility and competence.

At the age of 80, Professor Liviu LITERAT is an active person in the academic life as he still has many projects to work on. The group of his former and present colleagues and co-workers from the Faculty of Chemistry and Chemical Engineering addresses to Professor Literat the best wishes for a long life, full with further achievements.

Volume Editors,  
Mircea-Vasile Cristea  
Adina Lucreția Ghirișan

## LIST OF PUBLICATIONS

### BOOKS

#### A. Scientific and Technical books

1. **Liviu Literat**, Lucia Gagea, Firuța Goga, Eugenia Mirică, Ecaterina Olariu, Ceramică tehnică. Principii de calcul și proiectare, Ed. Casa Cărții de Știință, Cluj-Napoca, ISBN 973-686-194-5, 334 pag., 2001
2. **Liviu Literat**, Învățământul și cercetarea în chimie în perioada postbelică. Istoria României, Transilvania-vol II, cap V, Ed. Fundației "George Barițiu", Cluj-Napoca, ISBN 973-97902-0-8, p. 1167-1162, 1999
3. **Liviu Literat**, Operații și utilaje în industria materialelor oxidice, Ed. Universității Babeș-Bolyai, Cluj-Napoca, 425 pag., 1995
4. **Liviu Literat**, Fenomene de transfer și utilaje în industria chimică. Procese de transport, Ed. Universității Babeș-Bolyai, Cluj-Napoca, 177 pag., 1985
5. **Liviu Literat**, Chimie generală, Ed. Didactica și Pedagogică, București, 412 pag., 1975
6. **Liviu Literat**, Studiu fizico-chimic asupra unor alumine reducătoare nestoechiometrice. Teza de doctorat, Univ. Babeș-Bolyai, Cluj-Napoca, 1964

#### B. University Text Books

1. **Liviu Literat**, Operații și utilaje in industria materialelor oxidice, Ed. Universității Babeș-Bolyai, Cluj-Napoca, vol. I, 297 pag., vol II, 129 pag., 1995
2. **Liviu Literat**, Operații și utilaje in industria materialelor oxidice. Aplicații, Ed. Universității Babeș-Bolyai, Cluj-Napoca, 207 pag., 1994
3. **L. Literat**, R. Mișca, A. Ozunu, S. Drăgan, Fenomene de transfer și utilaje în industria chimică, Ed. Universității Babeș-Bolyai, Cluj-Napoca, 110 pag., 1993
4. **L. Literat**, R. Mișca, A. Ghirișan, Fenomene de transfer și utilaje in industria chimică. Îndrumar de lucrări practice, Ed. Universității Babeș-Bolyai, Cluj-Napoca, 107 pag., 1991
5. T. Bereczky, **L. Literat**, Lucrări practice de chimie generală, Ed. Institutului Politehnic din Cluj-Napoca, 110 pag., 1970
6. **Liviu Literat**, Chimie generală, Ed. Institutului Politehnic din Cluj-Napoca, 375 pag., 1966

7. T. Bereczky, **L. Literat**, E. Felszeghy, Chimie generală. Lucrări practice, Ed. Institutului Politehnic din Cluj-Napoca, 97 pag., 1958

8. T. Bereczky, A. Iacob, **L. Literat**, Chimie Generală (note de curs). Litografia Învățământului Cluj, 400 pag., 1955

**C. Miscellanea (Books, chapters and articles on various subjects in books and volumes, monographs)**

1. **Liviu Literat**, Învățământul tehnic superior la Universitatea Daciei Superioare în concepția profesorului Vasile Parvan, Lucrările celei de a 3-a Conferințe Naționale a Academiei de Științe Tehnice din România (ASTR), Ed. MEDIAMIRA Cluj-Napoca, Editori: R. Munteanu și D. Banabic, ISBN 978-973-713-223-9, p. 171-176, 2008

2. **Liviu Literat**, La zi aniversară în Universitatea POLITEHNICA București "Catedra de Știința și Ingineria Materialelor Oxidice și Nanomateriale la 60 de ani", Ed. POLITEHNICA Press, 2008

3. D. Fornade, Personalități clujene (1800-2007). Dicționar ilustrat. 678 pag. Ed. Casa Cărții de Știință, Cluj-Napoca, ISBN 98-973-133-101-0, (**L. Literat** colaborator), 2007

4. **Liviu Literat**, Alexandra Rus, Virgil Fulicea – Întoarcere în timp, Ed. Casa Cărții de Știință, Cluj-Napoca, ISBN 978-973-133165-7, 115 pag., 2007

5. **Liviu Literat**, Școala clujeană de inginerie chimică la a 35-a aniversare. Simpozionul Național de Inginerie chimică. LUCRĂRI ȘTIINȚIFICE, Ed. ACCENT, Cluj-Napoca, ISBN (13) 978-973-8915-18-3 (autor și editor), 118 pag., 2006

6. **Liviu Literat**, Rezonanțe ale personalității profesorului Șerban Solacolu în învățământul superior clujean, Academia de Științe Tehnice din România (colectiv de autori). Ed. AGIR, București, p. 43-47, 2005

7. Valeriu Literat, AMINTIRI. Ed. Casa Cărții de Știință, Cluj-Napoca, ISBN 973-686-719-6. (**L. Literat**, editor), 177 pag., 2005

8. **Liviu Literat**, A halt on the centenary of an illustrious scientist and school founder, Romanian Journal of Materials, București, vol. 35, nr. 3, p. 186-188, 2005

9. **Liviu Literat**, Professor Emilian A. Bratu centenary, Romanian Journal of Materials, vol. 35, nr. 1, p. 84-86, 2005

10. **Liviu Literat**, Învățământul românesc de inginerie chimică ctitorie a profesorului Emilian A. Bratu, Sesiune omagială "Centenar E. A. Bratu" București, p. 20-22, 2004

11. **Liviu Literat**, La centenarul profesorului Emilian A. Bratu. Sesiune omagială "Centenar Emilian A. Bratu", ASTR București, p. 23-30, 2004

12. **Liviu Literat**, Homage Paid to associate Professor dr. ing. Lucia Gagea. Romanian Journal of Materials, Bucharest, vol. 34, nr. 2, p. 150-152, 2004
13. **Liviu Literat**, The Chemical Engineering School of Cluj at the 30-th Anniversary, Studia Univ. Babeş-Bolyai, Chemia, vol. XLVI, nr. 1-2, p. 3-4, 2001
14. **Liviu Literat**, The Chemical Engineering Education at Cluj-Napoca in Data and Achive Documents, CD-ROM, Ed. ACCENT, Cluj-Napoca, ISBN 973-99821-8-2 Symposium "30-th years of Chemical Engineering Education at Cluj-Napoca", 2001
15. **Liviu Literat**, Becoming steps. Three Quarters Century of Romanian Chemical Education at the Alma Mater Napocensis, Journal of Building Materials, vol. 26, nr. 2, p. 160-170, 1995
16. **Liviu Literat**, 75 de ani de învățământ chimic românesc la Alma Mater Napocensis, Rev. Chim., vol. 45, nr. 7, p. 542, 1994
17. **Liviu Literat**, 20 de ani de învățământ de Inginerie Chimică la Cluj-Napoca, Studia Univ. Babeş-Bolyai, Chemia, vol. XXXVI, nr. 1-2, p. 59-60, 1991
18. **Liviu Literat** (autor și editor), Breviar Monografic (1971-1991). Facultatea de Chimie și Chimie Industrială. "Din istoricul învățământului de inginerie chimică la Cluj-Napoca", Ed. Universității Babeş-Bolyai, Cluj-Napoca, p. 14-92, 1991

#### SCIENTIFIC PUBLICATIONS. ARTICLES

1. **L. Literat**, Modelling of some processes with mass variation. Applications to the separation, classification and characterization of ceramic microdispersions through sedimentation, Romanian Journal of Materials, Bucharest, vol. 38, nr. 4, p. 321-330, 2008
2. L. Szell, **L. Literat**, A. Toth, L. Gagea, Pigmenți ceramici purpurii cu structură tip fluorină, Simpozion Național de Inginerie Chimică, Cluj-Napoca, Ed. ACCENT, Cluj-Napoca, ISBN (13)- 978-973-8915-18-3, p. 63-66, 2006
3. A. Orban, **L. Literat**, Considerații privind presarea axială a pulberilor ceramice, Simpozion Național de Inginerie Chimică, Cluj-Napoca, Ed. ACCENT, p. 67-71, 2006
4. C. Voica, L. Gagea, **L. Literat**, Glazuri ceramice cu efecte speciale pentru porțelan fosfatic, Simpozion Național de Inginerie Chimică, Cluj-Napoca, Ed. ACCENT, p. 78-84, 2006
5. F. Goga, **L. Literat**, C. Suci, Glasses in the  $\text{SiO}_2\text{-B}_2\text{O}_3\text{-Bi}_2\text{O}_3$  system, Reliability of Ceramics ECERS, Polish Ceramic Society, Cracow, (P.E 01), 2006
6. F. Goga, **L. Literat**, M. Gorea, C. Suci, Immiscibility in the  $\text{SiO}_2\text{-B}_2\text{O}_3\text{-Bi}_2\text{O}_3$  system, The 32-th Conference SSCHE, Tatranske Matliare (SK), Proceedings CD-ROM, p. 241-246, 2005

7. F. Goga, **L. Literat**, C. Suci, M. Mocean, PbO free frits for ceramic colorants, Romanian International Conference on Chemistry and Chemical Engineering RICCE XIV, Science and Engineering of Oxide Materials, Proceedings vol. 1, p. S08-71-78, 2005
8. F. Goga, **L. Literat**, M. Gorea, C. Suci, The immiscibility in the  $\text{SiO}_2\text{-B}_2\text{O}_3\text{-Bi}_2\text{O}_3$  system, Romanian International Conference on Chemistry and Chemical Engineering RICCE XIV, Proceedings vol. 1, p. S08-202-210, 2005
9. A. Toth, C. Dardai, L. Szell, L. Gagea, **L. Literat**, Structure of thin porous layers obtained from reactive powders, Romanian Journal of Materials, vol. 34, nr. 2, p. 90-98, 2004
10. A. Toth, **L. Literat**, R. Mişca, V. Dumbraveanu, C. Neagu, Asimetrical membranes with application for wine clearing and stabilizing, Romanian Journal of Materials, vol. 34, nr. 3, p. 196-205, 2004
11. L. Szell, **L. Literat**, L. Gagea, Cr. Dardai, A. Toth, Study on the synthesis and properties of the ceramic pigments in the  $\text{CeO}_2\text{-PrO}_2$  system, Romanian Journal of Materials, vol. 34, nr. 3, p. 183-189, 2004
12. A. Orban, M. Turos, **L. Literat**, Considerations about the axial pressing moulding method for grinding parts, Romanian Journal of Materials, vol. 34, nr. 4, p. 183-189, 2004
13. A. Toth, **L. Literat**, R. Mişca, R. Dumbraveanu, C. Neagu, Asymetric ceramic membranes with application in wine clarification and stabilisation, CONSILOX IX, Ceramics, Sighişoara, p. 185-196, 2004
14. L. Szell, Cr. Dardai, A.Toth, **L. Literat**, L. Gagea, Stady on the synthesis and properties of the ceramic pigments in the  $\text{CeO}_2\text{-PrO}_2$  system, CONSILOX IX, Ceramics, Sighişoara, p. 89-94, 2004
15. **L. Literat**, A. Orban, A study of the behaviour of some superaluminous powders at the shaping by isostatic and axial pressing, CONSILOX IX, Ceramics, Sighişoara, p. 159-170, 2004
16. A. Orban, **L. Literat**, M. Turos, Grinding parts shaped by axial pressing, CONSILOX IX, Ceramics, Sighişoara, p. 171-184, 2004
17. A. Toth, **L. Literat**, R. Mişca, Hydraulic strenght of the oxide membranes and gel layer, at convective transport of the aqueous dispersions, Romanian Journal of Materials, vol. 33, nr. 3, p. 234-241, 2003
18. **L. Literat**, A. Orban, The behaviour of some superaluminous ceramic powders atomised in the process of isostatic pressing, Romanian Journal of Materials, vol. 33, nr. 4, p. 270-277, 2003



19. A. Toth, R. Mişca, L. Gagea, A. Ozunu, **L. Literat**, Cross-flow separation of some heterogeneous systems through filtering on ceramic membranes, The 29-th Conference SSCHE, Tatranske Matliare (Sk) CD-ROM, p. 27-31, 2002
20. **L. Literat**, L. C. Bodizs, The influence of humidity on the rheological behaviour of ceramic powders in the pressing process, Romanian Journal of Materials, vol. 32, nr.1, p. 54-59, 2002
21. **L. Literat**, Recording device and exploring procedure of the settling curves. Applications to the Symptotic classifying of powdery systems, Studia Univ. Babeş-Bolyai, Chemia, vol. XLVI, nr. 1-2, p. 5-10, 2001
22. A. Toth, **L. Literat**, L. Gagea, Pore structure stability of alumina based membranes, Studia Univ. Babeş-Bolyai, Chemia, vol. XLVI, nr. 1-2, p. 11-16, 2001
23. **L. Literat**, Procedure of computerized recording of the settling curves. Application at the symptotic classifying of powdery systems, "30 years of Chemical Engineering Education at Cluj-Napoca", Ed.ACCENT Cluj-Napoca, CD ROM, 2001
24. A. Toth, **L. Literat**, L. Gagea, Pore structure stability of alumina based membrane, "30 years of Chemical Engineering Education at Cluj-Napoca", Ed. ACCENT Cluj-Napoca, CD ROM, ISBN-973-99821-8-2, 2001
25. **L. Literat**, Considerations on some mathematics models with application to the press-forming of ceramic powders, Ed. ACCENT Cluj-Napoca, CD ROM, 2001
26. A. Toth, I. Kotsis, K. Belofine-Bako, **L. Literat**, L. Gagea, Oxide membranes with selective layer organic-mineral, CONSILOX VIII, Alba-Iulia, vol. 1, p. 203-208, 2000
27. **L. Literat**, A. Ghirişan, The rheological behaviour of some silicate sol-gel systems, CONSILOX VIII, Alba-Iulia, vol. 1, p. 20-26, 2000
28. **L. Literat**, M. Cristea, L. Gagea, C. Pavel-Voica, Shaping by pressing of some ceramic powders. Diagrams and computing equations, CONSILOX VIII, Alba-Iulia, vol. 1, p. 290-295, 2000
29. C. Vasile, **L. Literat**, L. Gagea, L. Szell, Ceramic mass with ZrO<sub>2</sub> content and thermo-mechanics properties, CONSILOX VIII, Alba-Iulia, vol. 1, p. 27-32, 2000
30. **L. Literat**, A. Toth, M. Lasca, L. Gagea, Application of the ceramic membranes on the selective separation processes, Papers of the 2-nd International Symposium on Chemical Engineering Bucharest, SICHEM 2000, p. 49-56, 2000
31. **L. Literat**, A. Toth, M. Lasca, L. Gagea, Application of the ceramic membranes on the selective separation processes. Papers of the 2-nd International Symposium on Chemical Engineering Bucharest, SICHEM 2000, p. 49-56, 2000

32. **L. Literat**, I. Mureşan, P. Mureşan, Automatic determination of vapors adsorption isotherms on porous solids, *Acta Technica Napocensis Section Constr. Machines and Materials*, vol. 2, p. 139-146, 1999
33. A. Ozunu, **L. Literat**, L. Ghergari, L. Gagea, Kinetic models for gypsum dehydration, *Journal of Building Materials*, vol. 28, nr. 1, 1999
34. C. Pavel, L. Gagea, **L. Literat**, Glazuri mate pentru porţelan fosfatic, *Analele Univ. Oradea, Chimie*, p. 11-19, 1999
35. F. Goga, L. Gagea, **L. Literat**, M. Moceanu, Matrici vitoase cu fusibilitate ridicată, *Analele Univ. Oradea, Chimie*, p. 39-45, 1999
36. A. Ghirişan, **L. Literat**, Rheologic evolution of some sol-gel systems, *International Conference on Chemistry and Chemical Engineering, POLITEHNICA University Bucharest, CD-ROM*, p. 203-208, 1999
37. A. Ozunu, **L. Literat**, R. Mişca, Investigation of Gypsum Dehydration, *The 1-st International Conference of the Chemical Societies of the South-East European Countries. Chemical Sciences and Industry, Greece*, vol. 1, p. 103-105, 1998
38. A. Ozunu, **L. Literat**, R. Mişca, The materials moving in the drum rotary equipments. The influence of operational variables on the hold-up time distribution, *Journal of Building Materials*, vol.3, p. 197-203, 1998
39. **L. Literat**, F. Bele, L. Gagea, E. Koncz, Frite ceramice fusibile fără conţinut de metale toxice, *Analele Univ. Oradea, Chimie*, p. 113-119, 1998
40. R. Mişca, **L. Literat**, A. Ozunu, Appreciation of the rate determinant stage at non stationary extraction from porous medium through the general dimensional analysis, *Chem. Bull. „Politehnica” Univ. Timişoara*, vol. 43(57), p. 321-325, 1998
41. R. Mişca, **L. Literat**, A. Ozunu, Heat transfer in non steady state in liquid medium, *Chem. Bull. „Politehnica” Univ. Timişoara*, vol. 43(57), p. 326-332, 1998
42. A. Ozunu, **L. Literat**, R. Mişca, S. Drăgan, Parametric investigation of gypsum dehydration in a rotary drum reactor. *Conference on Materials and Manufacturing Technologies (II), MACHTEHN '98, Polytechnic University Cluj-Napoca*, p. 215-220, 1998
43. R. Mişca, **L. Literat**, A. Ozunu, S. Drăgan, General dimensional analysis applied to the unsteady dissolution of pure solids, *Papers of the 1-st International Chemical Engineering Symposium SICHEM. '98, Bucharest*, p. 134-141, 1998
44. R. Mişca, **L. Literat**, A. Ozunu, S. Drăgan, General dimensional analysis applied to the unsteady extraction from porous solid medium under the ultra sound action, *Papers of the 1-st International Chemical Engineering Symposium SICHEM '98, Bucharest*, p. 178-183, 1998

45. A. Ozunu, **L. Literat**, R. Mişca, S. Drăgan, Scale-up of the rotary drum reactors. Applications to the non catalytic gas-solid processes devolving at low temperatures, Papers of the 1-st International Chemical Engineering Symposium SICHEM '98, Bucharest, p. 192-201, 1998
46. A. Ozunu, **L. Literat**, R. Mişca, S. Drăgan, Comparative study on the macro kinetic and mathematics modeling of the sodium bicarbonate thermal decomposition and of the natural gypsum dehydration, Papers of the 1-st International Chemical Engineering Symposium SICHEM '98, Bucharest, p. 202-211, 1998
47. **L. Literat**, A. Toth, L. Gagea, A. Sintoma, Structural and functional characteristics of some micro filtering oxide membranes, Papers of the 1-st International Chemical Engineering Symposium SICHEM '98, Bucharest, p. 394-401, 1998
48. **L. Literat**, C. Voica, L. Gagea, Study on the crystallization process in matte glazes for the phosphate porcelain, STICLOCERAM '98, Technical University Cluj-Napoca, p. 112-116, 1998
49. A. Ozunu, R. Mişca, **L. Literat**, Parametric investigation of sodium bicarbonate decomposition in a rotary drum reactor, Studia Univ. Babeş-Bolyai, Chemia, vol. XLII, nr. 2, p. 255-262, 1997
50. A. Ozunu, R. Mişca, **L. Literat**, Experimental aspects on the thermal decomposition of sodium bicarbonate in a rotary drum reactor, National Conference of Chemistry and Chemical Engineering, Politehnica University Bucharest, vol. 1, pag. 540-545, 1997
51. A. Ozunu, **L. Literat**, R. Mişca, M. Ozunu, Pulverous materials motion in the rotary drum equipments, National Conference of Chemistry and Chemical Engineering, Politehnica University Bucharest, vol. 1, p. 583-588, 1997
52. R. Mişca, A. Ghirişan, **L. Literat**, A. Ozunu, S. Drăgan, The kinetic of solid-liquid extraction. Hypophae fructus oil, Studia Univ. Babeş-Bolyai, Chemia, vol. XLI, nr. 1, p. 55-60, 1996
53. **L. Literat**, L. Gagea, E. Mirică, J. Ţipan, Alternative proceeding for granulometric analysis of powdery dispersions, Journal of Building Materials, vol. 24, nr. 2, p. 132-137, 1995
54. T. Klainhempel, F. Atanasiu, **L. Literat**, Dimensionarea tehnologică a instalaţiilor PSA. Model de echilibru pentru dimensionarea coloanelor PSA, Rev. Chim, vol. 46, nr. 8, p. 756-764, 1995
55. **L. Literat**, A. Ozunu, R. Mişca, A. Ghirişan, Discrimination method for sedimentation regimes with application in the symptotyc classification, Proceedings Academic Days Timişoara, Section Chemical Sciences, vol. 2, p. 27-30, 1995

56. A. Ozunu, **L. Literat**, Considerations about fluid catalytic cracking. Modeling and control, Selected topics on Chemical Reaction Engineering, Bratislava, Slovakia, p. 202, 1994
57. R. Mișca, **L. Literat**, Hypophae fructus oil separation, Selected topics on Chemical Reaction Engineering, Bratislava, Slovakia, p. 203, 1994
58. **L. Literat**, Corelări privind regimul, viteza și dimensiunile particulelor în analiza sedimentometrică, Rev. Chim., vol. 45, nr. 10, p. 921-922, 1994
59. **L. Literat**, E. Mirica, L. Gagea, F. Bele, Proprietățile filmelor subțiri de titanat de bariu obținute prin metoda sol-gel, Simpozionul de Științe Moderne și Energie, Universitatea Tehnică Cluj-Napoca, p. 39-41, 1993
60. **L. Literat**, Korindonische unterlagen fur maleische Anhydrid Katalyzatoren, Studia Univ. Babeș-Bolyai, Chemia, vol. XXXVII, nr. 1, p. 99-104, 1992
61. **L. Literat**, Relații criteriale privind transportul difuziv-convectiv în procese staționare și nestaționare, Comunicări științifice, Aparare și automatizări în industria chimică, Timișoara, vol. II, p. 5-12, 1991
62. **L. Literat**, Neue kriterielle Abfassungen im stationaren konvektiv-molekularen Eigenschafts Transport, Studia Univ. Babeș-Bolyai, Chemia, vol. XXXV, nr.2, p. 51-54, 1990
63. **L. Literat**, Uber einige kriterielle Beziehungen in nichtstationaren konduktiv-konvektiven Eigenschafts transport, Studia Univ. Babeș-Bolyai, Chemia, vol. XXXV, nr. 1, p. 99-103, 1990
64. **L. Literat**, Electro-corindonul poros, suport pentru catalizatori, Revista Materiale de Construcții, vol.19, nr. 4, p. 246-249, 1989
65. **L. Literat**, D. Vasilescu, Suporturi catalitice pentru anhidrida ftalică, Revista Materiale de Construcții, vol.18, nr. 3, p. 204-207, 1988
66. N. Almași, J. Mureșan, **L. Literat**, E. Cîmpan, F. Kakso, C. Viragh, I. Batiu, Structura și morfologia unor pulberi de carbonat de nichel, Conferința Națională de Metalurgie a Pulberilor (III), Institutul Politehnic Cluj-Napoca, vol. 2, p. 25-30, 1988
67. **L. Literat**, T. Farcaș, N. Farbas, D. Literat, E. Cîmpean, F. Kacso, N. Almași, V. Corbeanu, Investigații de microscopie electronică asupra unor dispersii de carbonat de nichel, Conferința Națională de Metalurgie a Pulberilor (III), Institutul Politehnic Cluj-Napoca, vol. 2, p. 31-36, 1988
68. **L. Literat**, N. Farbas, M. Lazar, D. Literat, E. Bodis, Forma distribuției particulelor pulberilor de carbonat de nichel, Conferința Națională de Metalurgie a Pulberilor (III), Institutul Politehnic Cluj-Napoca, vol. 3, p. 15-18, 1988

69. **L. Literat**, Elektronenmikroskopische Untersuchung einiger Feuerfestmassen die als katalytische Trager Wirken, *Keramische Zeitschrift*, 6, p. 378-381, 1987
70. **L. Literat**, D. Vasilescu, Mase ceramice superaluminose cu liant mulitic și porozitate controlată ca suport catalitic, *Revista Materiale de Construcții*, vol.16, nr. 1, p. 47-50, 1986
71. **L. Literat**, N. Farbas, Investigații asupra silicaților prin intermediul analizei microelectronice, *Revista Materiale de Construcții*, vol.16, nr. 2, p. 140-142, 1986
72. **L. Literat**, Microstructura, compoziția și textura unor cimenturi ușoare cu granulit, *Revista Materiale de Construcții*, vol.16, nr. 2, p. 89-94, 1986
73. **L. Literat**, Studiul microscopiei electronice asupra unor suporturi catalitice refractare, *Revista Materiale de Construcții*, vol. 15, nr. 2, p. 89-91, 1985
74. **L. Literat**, S. Gocan, E. Ursu, Caracteristici de suprafață și cromatografice ale silicagelului RIE, *Studia Univ. Babeș-Bolyai, Chemia*, vol. XXVIII, nr. 1, p. 52-55, 1983
75. **L. Literat**, V. Cuciurean, I. Dragomir, Investigații reologice a unor dispersii ceramice în câmp ultrasonic, *Studia Univ. Babeș-Bolyai, Chemia*, vol. XXVIII, nr. 1, p. 56-59, 1983
76. **L. Literat**, N. Farbas, Investigații ale microscopiei electronice asupra unor depuneri metalice pe suporturi silico-aluminoși, *Conferința Națională de Metalurgie a Pulberilor (II)*, Institutul Politehnic Cluj-Napoca, vol. 3, p. 135-140, 1983
77. **L. Literat**, A. Motiu, N. Farbas, Microstructura, compoziția și textura unor ceramici sinterizate, *Conferința Națională de Metalurgie a Pulberilor (II)*, Institutul Politehnic Cluj-Napoca, vol. 3, p. 141-146, 1983
78. **L. Literat**, Studiul unor zeoliți naturali indigeni, *Simpozionul Național - Zeoliți în Tehnologia Modernă*, Iași, p. 417-423, 1983
79. **L. Literat**, A. Barbat, E. Baditoiu, Indigene volcanic tuffs as anti agglomerating agents for nitrogenous fertilizer, *Conference Permanente des Ingineurs de Sud-Est de l' Europe COPISEE (II)*, Section 3, p. 343-350, Cluj-Napoca, Romania, 1983
80. **L. Literat**, A. Barbat, I. Batiu, Zeolite antiagglomerating agents for mineral fertilizer. Protection mechanisms, *Conference Permanente des Ingineurs de Sud-Est de l'Europe COPISEE (II)*, Sec. 3, p. 551-561, Cluj Napoca, Romania, 1983
81. **L. Literat**, T. Farcaș, C. Dasoveanu, M. Stanciu, Metoda analizei microscopiei electronice asupra structurii și compoziției unor catalizatori pentru procese petrochimice, *Lucrările științifice ale ICITPR Ploiești*, p. 4-10, 1983

82. **L. Literat**, J. Gros, Rășini schimbătoare de ioni cu structură de stiren și divinil benzen, Contribuții în Chimie, Simpozionul Național Cluj-Napoca, p. 65-68, 1982
83. **L. Literat**, A. Moțiu, T. Farcaș, Catalizatori pentru etilen oxid. Investigații microstructurale. Contribuții în Chimie, Simpozionul Național Cluj-Napoca, p. 69-71, 1982
84. **L. Literat**, Procedee de sorbție aplicate pentru investigarea caracteristicilor de suprafață și texturale ale solidelor, Academia Română, Series 4, nr. 2, p. 67-89, tome 4, 1981 (prezentare acad. Emilian A. Bratu)
85. **L. Literat**, S. Gocan, E. Ursu, Caracteristici de suprafață ale silicagelului cromatografic R tratat termic și chimic, Studia Univ. Babeș-Bolyai Cluj, Chemia, vol. XXV, nr. 1, p. 67-71, 1980
86. **L. Literat**, L. Marta, Cercetări asupra pietrei de ciment din betoanele ușoare cu granulit, Schimb experimental cu Laboratoarele de Inginerie Civilă Tg. Mureș, vol. 1, p. 110-116, 1979
87. **L. Literat**, M. Langa, Cercetări experimentale privind posibilitățile de caracterizare structurală a unor solide poroase și pulverulente utilizând date cinetice, Schimb experimental cu Laboratoarele de Inginerie Civilă Tg. Mureș, vol. 1, p. 215-220, 1979
88. **L. Literat**, J. Gros, Schimbători de ioni macroporoși indigeni. Caracteristici texturale, Studia Univ. Babeș-Bolyai, Chemia, vol. XXIII, nr. 1, p. 58-60, 1978
89. **L. Literat**, O. Negru, Procedeu de calcul și reprezentare programată a distribuției volumului porilor în solide poroase și pulverulente, Studia Univ. Babeș-Bolyai Cluj, Chemia, vol. XXIII, nr. 2, p. 47-51, 1977
90. **L. Literat**, Caracteristici fizice și structurale ale unor cimenturi expandate, Lucrările științifice ale I.P.C., C1, p. 375-379, 1978
91. **L. Literat**, V. Cuciurean, Reziduuri ale fabricării acetilenei din carbit utilizate ca materiale de construcții, Lucrările științifice ale I.P.C., p. 390-393, 1978
92. **L. Literat**, J. Gros, Caracteristici superficiale și de structură ale unor rășini schimbătoare de ioni indigene, Studia Univ. Babeș-Bolyai Cluj, Chemia, vol. XXII, 1, p. 3-7, 1977
93. **L. Literat**, Modificări de stoechiometrie induse de sorpția amoniacului gazos pe alumine, Studia Univ. Babeș-Bolyai Cluj, Chemia, vol. XXII, nr. 1, p. 8-10, 1977
94. **L. Literat**, O. Negru, Procedeu de calcul pentru determinarea ariei specifice și a distribuției porilor în solide poroase și pulberi, Studia Univ. Babeș-Bolyai Cluj, Chemia, vol. XXII, nr. 1, p. 61-64, 1977

95. **L. Literat**, V. Cuciurean, Studiul fizico-chimic al unor argile coloidale montmorillonitice. Bentonita de la Săndulești-Turda, *Studia Univ. Babeș-Bolyai, Cluj, Chemia*, vol. XXII, nr. 2, p. 43-46, 1977
96. **L. Literat**, O. Negru, Procedeu de calcul pentru caracterizarea unor pulberi texturate, Conferința Națională de Metalurgie a Pulberilor (I), Cluj-Napoca, *Comunicări științifice*, vol. 1, p. 45-50, 1975
97. **L. Literat**, Considerații asupra unor metode cinetice de sorbție pentru solide poroase și pulberi, Conferința Națională de Metalurgie a Pulberilor (I), Cluj-Napoca, *Comunicări științifice*, vol. 1, p. 51-55, 1975
98. **L. Literat**, V. Cuciurean, Studii termoanalitice privind oxidarea unor aliaje de Ag-Cd alloys, Conferința Națională de Metalurgie a Pulberilor (I), Cluj-Napoca, *Comunicări științifice*, vol. 3, p. 19-22, 1975
99. **L. Literat**, Investigations des solides poreux par mesurages cinetiques de sorbtion, Comte Rendu du Colloque International RILEM/IUPAC - Structure des pores et proprietees des materiaux, C, p. 129-138, Prague, Czechoslovakia, 1973
100. **L. Literat**, Proprietăți electrice ale unor catalizatori montmorillonitici, *Buletinul Științific al I.P.C.*, nr.13 bis, p. 75-78, 1971
101. **L. Literat**, V. Cuciurean, Studii privind aplicarea unor metode simple pentru determinarea suprafețelor specifice ale cimenturilor, *Buletinul Științific al I.P.C.*, nr.13 bis, p. 79-83, 1971
102. **L. Literat**, Suprafața acidă a unor alumine sărace în oxigen, *Lucrările științifice ale I.P.C.*, p. 145-148, 1971
103. **L. Literat**, V. Cuciurean, Studii termo-analitice ale unor pulberi pe bază de aliaje de Ag-Cd, *Lucrările științifice ale I.P.C.*, p. 149-152, 1971
104. **L. Literat**, V. Cuciurean, Studiul cinetic al oxidării unor pulberi pe bază de aliaje de Ag-Cd, *Lucrările științifice ale I.P.C.*, p. 153-156, 1971
105. **L. Literat**, V. Cuciureanu, Criteres cinetiques dans l'etude d'oxidation des alliages d'Ag-Cd pulverulents, 39-eme Congres International de Chimie Industrielle, Bucharest, 3, p. 71-75, 1970
106. **L. Literat**, Studiul termo-analitic și cinetic al descompunerii metil-aluminelor, *Buletinul Științific al I.P.C.*, nr.12, p. .111-1184, 1969
107. E. Stoicovici, E. Felszeghy, **L. Literat**, P. Krobl, E. Vermesan, L. Nagy, Contribuții la studiul argilelor coloidale din R.S.R. (IX). Argila de la Sindominic-Ciuc, *Studia Univ. Babeș-Bolyai Cluj, Chemia*, vol. XIII, nr. 2, p. 111-118, 1968

108. **L. Literat**, Deviations from stoichiometry and structural modifications of some aluminae, *Revue Roumaine de Chimie*, nr. 13, p. 1161-1167, 1968
109. E. Felszeghy, M. Ilies, P. Krobl, **L. Literat**, L. Nagy, E. Stoicovici, Contribuții la studiul argilelor coloidale din R.P.R. (VIII). Bentonite din Ciugud, Alba, *Studia Univ. Babeș-Bolyai Cluj, Chimia*, vol. XIII, nr. 1, p. 9-17, 1968
110. **L. Literat**, Donneés thermoanalytiques sur la nonstoechiometrie de quelques aluminés noires reductrices, *Revue Roumaine de Chimie*, nr. 13, p. 731-737, 1968
111. **L. Literat**, Activitatea catalitică și structura suprafeței unor alumino-silicați, *Buletinul Științific al I.P.C.*, nr.11(1), p. 117-123, 1968
112. **L. Literat**, Activitatea catalitică a unor alumine nestoechiometrice reducătoare, *Buletinul Științific al Institutului Politehnic București*, tome 29, nr. 3, p. 65-75, 1967
113. E. Felszeghy, M. Ilies, P. Krobl, **L. Literat**, L. Nagy, E. Stoicovici, Contribuții la studiul argilelor coloidale din R.P.R. (VII). Bentonita de la Gura-Sada – Hunedoara, *Studia Univ. Babeș-Bolyai Cluj, Chimia*, vol. XII, nr. 2, p. 43-48, 1967
114. **L. Literat**, L'activitee catalytique des certaines aluminés nonstoechiometriques, *Revue Roumaine de Chimie*, nr. 12, p. 1213-1222, 1967
115. **L. Literat**, Studii de rezonanță magnetică și a conductivității electrice cu variația presiunii de oxigen a unor alumine reducătoare nestoechimetrice, *Analele Universității București, Seria Științele Naturii*, nr. 1, p. 49-63, 1965
116. E. Felszeghy, **L. Literat**, A. Covaci, Un aparat simplu pentru dozarea carbonatului. Note de laborator, *Studia Univ. Babeș-Bolyai Cluj, Chimia*, vol. X, nr. 1, p. 145-146, 1965
117. **L. Literat**, Contribuții la problema nestoechiometriei oxizilor refractari. Studii asupra caracteristicilor magnetoelectrice ale unor alumine nestoechiometrice reducătoare, *Rev. Chim*, vol. 16, nr.5, p. 262-268, 1965
118. **L. Literat**, Noi date privind nestoechiometria aluminelor. Variația izotermală a conductivității electrice cu presiunea oxigenului, *Lucrările științifice ale Institutului Politehnic Cluj (I.P.C.)*, nr. 7, p. 87-94, 1964
119. **L. Literat**, Studiul aluminelor nestoechiometrice reducătoare prin rezonanță electro-magnetică, *Lucrările științifice ale I.P.C.*, nr. 7, p. 95-101, 1964
120. E. Felszeghy, M. Ilies, P. Krobl, **L. Literat**, L. Nagy, E. Stoicovici, Contribuții la studiul unor argile coloidale din R.P.R. (VI). Bentonita de la Orașul Nou, *Studia Univ. Babeș-Bolyai Cluj, Chimia*, vol. VIII, nr. 1-2, p. 93-103, 1963



121. **L. Literat**, Studiul fizico-chimic al aluminei nestoechiometrice, *Lucrările științifice ale I.P.C.*, nr. 6, p. 119-126, 1963
122. E. Felszeghy, M. Ilies, **L. Literat**, L. Naghy, E. Stoicovici, I. Soos, Contribuții la studiul unor argile coloidale din R.P.R. (V). Bentonita de la Ocna Mureș, *Studia Univ. Babeș-Bolyai Cluj, Chimia*, vol. VII, nr. 1-2, p. 87-98, 1962
123. **L. Literat**, Contribuții la studiul aluminei nestoechiometrice (II). Studiul proprietăților electrice, *Buletinul Științific al I.P.C.*, nr.5, p. 95-105, 1962
124. **L. Literat**, Contribuții la studiul aluminei nestoechiometrice (I). Condiții de obținere a aluminei reducătoare, *Buletinul Științific al I.P.C.*, nr. 5, p. 81-93, 1962
125. **L. Literat**, Descompunerea acidului formic cu alumine reducătoare nestoechiometrice, *Buletinul Științific al I.P.C.*, nr. 5, p. 107-118, 1962
126. **L. Literat**, Considerații la determinarea ariei specifice a cimentului, *Buletinul Științific al I.P.C.*, nr. 4, p. 103-111, 1961
127. T. Bereczky, **L. Literat**, O nouă metodă de studiu aplicată nisipurilor pentru turnare, *Lucrările științifice ale Institutului Politehnic Cluj*, nr. 3, p. 69-79, 1960
128. E. Felszeghy, **L. Literat**, E. Stoicovici, M. Ilies, M. Kulcsar, L. Nagy, Contribuții la studiul argilelor coloidale din R.P.R. (IV), Noi date despre bentonita de la Cugir, *Studia Univ. Babeș-Bolyai Cluj, Chimia*, vol. IV, nr. 1-2, p. 175-192, 1959
129. E. Felszeghy, **L. Literat**, E. Stoicovici M. Ilies, M. Kulcsar, L. Nagy, Contribuții la studiul argilelor coloidale din Republica Populară Română (III). Bentonitele de la Tg. Lăpuș și Izvorul Oltului, *Lucrările științifice ale I.P.C.*, nr. 2, p. 159-169, 1959
130. E. Felszeghy, M. Ilies, M. Kulcsar, **L. Literat**, L. Nagy, E. Stoicovici, Contribuții la studiul argilelor coloidale din R.P.R. (II). *Lucrările științifice ale I.P.C.*, nr. 2, p. 145-157, Romania, 1959
130. E. Felszeghy, **L. Literat**, Izotermele de adsorbție ale vaporilor de metanol pe argile coloidale, *Lucrările științifice ale I.P.C.*, nr. 2, p. 171-179, 1959
132. **L. Literat**, Contribuții la metodologia adsorbției vaporilor și gazelor, *Lucrările științifice ale I. P.C.*, nr.2, p. 181-189, 1959
133. E. Felszeghy, M. Ilies, M. Kulcsar, **L. Literat**, L. Nagy, E. Stoicovici, Contribuții la studiul argilelor coloidale din R.P.R. (I), *Lucrările științifice ale I.P.C.*, nr. 1, p. 31-46, 1958.