CURRICULUM VITAE

FAMILY NAME: **Boghosian**
NAME: **Soghomon**
Date of birth: 11 May 1961, in Athens, GREECE
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EDUCATION

- Diploma in Chemical Engineering, University of Patras (GREECE), 1984
  (Diploma grade: "Honours")
- PhD in Chemical Engineering, University of Patras, 1988
  - Dissertation grade: "Honours"
  PhD Thesis title: "*Catalytic oxidation of sulfur dioxide in molten salts. Formation of crystalline compounds and catalyst deactivation*"

PRFESSIONAL CAREER

- **Professor,** Department of Chemical Engineering, University of Patras, (2011 –)
- **Chairman,** Department of Chemical Engineering, University of Patras. (2011 – 2013)
- **Vice Chairman,** Department of Chemical Engineering, University of Patras. (2009 – 2011, 2013 – 2015)
- **Associate Professor,** Department of Chemical Engineering, University of Patras, (2006 – 2011)
- **Director,** Laboratory of Physical Chemistry and Applied Molecular Spectroscopy, Department of Chemical Engineering, University of Patras, (2006 –)
- **Collaborating Faculty Member**, FORTH/ICE-HT, (1995 –)
- **Assistant Professor**, Department of Chemical Engineering, University of Patras, (2000 – 2006)
- **Lecturer (faculty)**, Department of Chemical Engineering, University of Patras, (1995 – 2000)
- **Post-doctoral fellow**, FORTH/ICE-HT, (1991 – 1995)
- **Adjunct Lecturer**, Department of Chemical Engineering, University of Patras, (1991 – 1995)
- **Post-Doctoral fellow,** Institute of Inorganic Chemistry, Norwegian University of Science and Technology (NTNU), Trondheim, Norway. (Nov.1988 – Dec.1989). Duration: 13 months

Study visits

- Chemistry Department, The Technical University of Denmark (1992, 1993, 1994, 1996, 1997).
- Institute of Inorganic Chemistry, Norwegian University of Science and Technology –NTNU (1993).

SCIENTIFIC AND RESEARCH INTERESTS

- High temperature Raman spectroscopy and Heterogeneous Catalysis. *In-situ* Raman studies of catalytic processes at the molecular level with simultaneous measurements of catalytic activity (*operando* Raman spectroscopy). Structure-function relationships in catalytic systems. Molecular structure of supported and mixed metal oxide catalysts. Molecular spectroscopy and vibrational isotope effects. Probing structural properties and defects in ceria based mixed oxide materials.
- Operando spectroscopy
- Raman Spectroscopy and Thermodynamics. Correlations of spectral intensity data and stoichiometry, equilibrium constants and thermodynamics of reactions in solution and in gaseous phase.
- Inorganic coordination complexes in solid, molten and vapor state. Structure of molten salts, ionic liquids and gases at high temperatures by Raman spectroscopy and UV/VIS. Physicochemical properties of catalytic systems in molten salts and ionic liquids.
- Structural damage of parchment by Raman spectroscopy.

SCHOLARSHIPS – FELLOWSHIPS – PRIZES

- FORTH/ICE-HT Scholarships (1984 - 1988)
- Calouste Gulbenkian Fellow (1982 - 1988)
- Greek Fellowships Institution (IKY) Scholar (1981 -1984)
- Panhellenic Prize of Greek Mathematical Foundation (1978)

TEACHING RECORD

A **Tutor** [as Adjunct Lecturer (1991-1995), Lecturer (1995-2000), Assistant Professor (2000-06), Associate Professor (2006 -11) and Professor (2011 -)] of the following courses at the Department of Chemical Engineering, University of Patras

Course (semester based)	Academic years	Total
XM 220. Principles of Thermodynamics	1995-96, 1996-97, 1997-98, 2001-02, 2002-03, 2003-04, 2006-18	**18**
XM 320. Chemical Thermodynamics	1996-99, 2001-03, 2006-18	**17**
XM 941. Plant design & Economics for Chemical Engineers I	1991-96, 1997-2006	**14**
XM 1041. Plant design & Economics for Chemical Engineers II	1991-92, 1992-93, 1993-94,1994-95, 1997-2003	**10**
XM 521. Physical Chemistry Laboratory	1998-2017	**19**
Organic Chemical Industries	1991-92, 1992-93	**2**
Chemical Technologies	1993-94, 1994-95, 1995-96	**3**
Instrumental Chemical Analysis	1998-99, 1999-2000	**2**
II 801 Principles of Chemical Engineering I /Chemical Thermodynamics (Graduate course)	2004-2018	**14**

Furthermore:

- Supervisor of fourty eight (48) completed diploma theses
- Member of 31 examination committees of PhD theses
- Supervisor of eight (8) completed PhD theses
- Supervisor of one (1) PhD thesis in progress

B **Tutor** (as Adjunct Professor) at the Hellenic Open University of the following courses

Course (year based)	Academic years	Total
FYE 22 Physical Chemistry	2002-2018	**16**

Books – Teaching notes

1. "*Chemical Thermodynamics" (in Greek)*, Hellenic Open University, 2008 (2nd edition, extended and updated). ISBN: 978-960-538-804-4
2. "*Chemical Thermodynamics" (in Greek)*, Hellenic Open University, 2001. ISBN: 960-538-121-4
3. "Basic Principles of Design for Chemical Engineers" (in greek), University of Patras.
4. Teaching notes *"Organic Chemical Industries"*.

FOREIGN LANGUAGES

Greek (mother tongue)
English (perfect command)
French (perfect command)
Armenian (perfect command)
Danish/Norwegian (understanding, mainly in social level).

DISTINCTIONS – PROFESSIONAL SERVICES

- National Representative in the Management Committee of COST Actions D36 "Molecular Structure-Performance Relationships at the Surface of Functional Materials" (2005 – 2011) and CM1104 "Reducible Oxide Chemistry/Structure and Function" (2012 –2016)
- Member, International Advisory Board, EUCHEM Conference on Molten Salts and Ionic Liquids, (Estonia, 2014)
- Co-chair, EUCHEM Conference on Molten Salts and Ionic Liquids, (United Kingdom, 2012)
- Editorial Board Member, *Green Chemistry, Royal Society of Chemistry* (1998 – 2002)
- Honorary Fellow, Australian Institute of High Energetic Materials (2010 –)
- Member, Interantional Advisory Board, EUCHEM Conference on Molten Salts and Ionic Liquids
- Referee, Qatar National Research Foundation (2013 -)
- Referee, ASPECT Program (Advanced Sustainable Processes Engaging Catalytic Technologies), *Netherlands Organisation for Scientific Research* (2009 -)
- Referee, Romanian Research Council (2012 -)
- Registered Referee, (Referee ID# 10545), *The Royal Society of Chemistry*, UK. (1999 –)
- Organising Committee, 9th and 10th Panhellenic Chemical Engineering Conference, Athens 25-27/5/2013, Patras 4-6 June 2015
- Organising Committee, 2nd & 3rd Panhellenic Symposium of Green Chemistry, Patras, 8–10/3/2007, Thessaloniki 25–27/9/2009
- Scientific Committee, 4th Panhellenic Conference on Green Chemistry & Sustainable Development, Ioannina 30/10-1/11 2014
- Organising Committee, NATO ARW (Advanced Research Workshop) on "Green Industrial Applications of Ionic Liquids", Crete, Greece, 12 – 16 April 2000.
- Organising Committee, 14th Panhellenic Catalysis Symposium (2016)
- Scientific committee, 2nd , 3rd , 7th and 11th Panhellenic Chemical Engineering Conferences (1999, 2001, 2009, 2017)
- Session chair, 2nd Workshop on "Molecular Structure-Performance Relationships at the Surface of Functional Materials", Dublin, Ireland (2008)
- Session chair, EUCHEM Conferences on Molten Salts and Ionic Liquids, (Copenhagen, Denmark 2008), (Bamberg, Germany 2010)
- Session chair, 8th , 9th and 10th Panhellenic Catalysis Symposia (2004, 2006, 2008)
- Session chair, 1st , 2nd , 5th , 7th, 8th and 9th Panhellenic Chemical Engineering Conferences (1997, 1999, 2005, 2009 and 2011)
- Session chair, "Molten Salt Chemistry and Technology", 183rd ECS Meeting, Honolulu, (1993)
- Member of examination committees of Greek Chambers of Engineers (1995, 1998, 2000, 2001, 2002, 2003, 2004, 2008, 2014)

<u>Member of professional organizations and societies</u>

- Hellenic Catalytic Society
- Technical Chamber of Greece
- Panhellenic Society of Chemical Engineers

ADMINISTRATIVE SERVICES

- Chairman, Department of Chemical Engineering, University of Patras (2011 – 2013)
- Vice Chairman, Department of Chemical Engineering, University of Patras (2009 – 2011, 2013 –2015)
- Director, Division of Chemical Technology and Applied Physical Chemistry, Department of Chemical Engineering, University of Patras (2007 – 2009, 2013 – 2015)
- Scientific Responsible of Program for "Infrastructure for Supporting Reformation of undergraduate study program of the Department ofChemical Engineering" – EPEAEK II/ETPA, 2003–2008
- Representative of University of Patras in the program of bilateral exchanges with The Technical University of Denmark (DTU)in the framework of SOCRATES/ERASMUS and ERASMUS/MUNDUS

Coordinator and/or Scientific Responsible of research programs

Title/Partnership	Duration	Budget for Patras	Role
The Destruction of Environmentally Offensive Halocarbons Using Sodium Metal". **CEC Environment** Programme Contract number EV5V.CT92.0238 Partners: UMIST, Electricity Association TL (UK), Wormald Mother & Platt (IR)	01.01.1993-31.01.1996	**140.000 €**	Scientific responsible
"Pollution Control by Catalysis". **INTAS** project no. 93-3244. Partners: Boreskov Institute of Catalysis (RU), Universite de Provence (FR), Technical University of Denmark (DK)	01.01.1995-31.12.1997	**6.000 €**	Scientific responsible
"Molten Salt Catalysts for Production of Sulfuric Acid and SO_2 Removal from Flue Gas" . **CEC BRITE-EURAM** Programme. Contract number BRE2.CT93.0447 Partners: Chemical Industries of Northern Greese A/S, Technical University of Denmark(DK), Haldor Topsoe(DK)	01.09.1993-31.08.1996	**247.000 €**	Coordinator
Recovery of precious metals from deactivated automotive catalysts. **PENED / Ministry of Development**	01.06.1996-31.05.1998	**23.480 €**	Scientific responsible
"Catalytic and Electrochemical Processes for SO_2 and NO_x Emission Abatement." **NATO Science for Peace** *Planning Award* Partners: Georgia Tech (USA), Technical University of Denmark (DK), Boreskov Institute of Catalysis (RU), University of Bucharest (RO), Byisk Oleum (RU)	01.01.1998-31.07.1998	**5.775 €**	Coordinator
Recovery/separation of Pt and Rh with Chemical Vapor Transport mediated by vapor complex formation. **FORTH/ICE-HT** internal competitive programs	01.01.1998-31.12.1999	**11.100 €**	Scientific responsible
"Catalytic and Electrochemical Processes for SO_2 and NO_x Emission Abatement." **NATO Science for Peace** Partners: Georgia Tech (USA), Technical University of Denmark (DK), Boreskov Institute of Catalysis (RU), University of Bucharest (RO), Byisk Oleum (RU)	01.02.1999 31.01.2003	**70.000 €**	Coordinator
"Catalytic and Electrochemical Processes for SO_2 and NO_x Emission Abatement." **Ministry of Development/DG International R&D Cooperations**	01.01.1999-31.12.2002	**26.300 €**	Scientific responsible
"Improved Damage assessments of Parchments" Partners: Royal Danish Academy of Fine Arts, U. of London, CNRS, Musee Nationale d'Istoire Naturelle, U. of Stirling, U. Torino, Royal Danish Library, National Czech Library **CEC/Enviroment**	01.03.2002-31.08.2005	**88.200 €**	Scientific responsible
Infrastructure for supporting the reformation of undergraduate study program of the Department of Chemical Engineering of University of Patras. **EPEAEK II/ E.T.P.A. (European Fund for Regional Development)**	01.04.2003-30.06.2006	*75.800 €*(*)	Scientific responsible
Studies of supported transition metaloxide catalysts with simultaneous monitoring of catalytic activity by *in situ* Raman spectroscopy **C. Caratheodory** competitive program (University of Patras)	15.11.2003-14.11.2006	**23.475 €**	Scientific responsible
Studies of catalytic systems by *in situ* Raman spectroscopy **EPEAEK II/ HRAKLEITOS (European Fund for Regional Development)**	08.11.2002-22.10.2005	**33.429 €**	Scientific responsible
Correlations of molecular structure and catalytic activity in catalytic systems based on supported transition metal oxides by *operando* Raman spectroscopy **C. Caratheodory** competitive program (University of Patras)	01.01.2009-31.12.2012	**30.000 €**	Scientific responsible
«Investigation of the environmental factors effects on organic materials constituting the natural and cultural heritage» Partners: TEI Athens, University of Ioannina, National Technical University of Athens, Technical University of Crete, Economic University of Athens. **ESPA/THALES**	01.02.2012-30.11.2015	**71.300 €**	Scientific responsible
"Development of new advanced Ce-Zr-O-based materials for automotive catalytic pollution control applications", Partners: U. of Cyprous, ICP/Spain **RPF/DESMI-THEPIS**	01.07.2012-30.06.2015	**15.000 €**	Scientific responsible

"In Situ Raman Spectroscopy of ceria-based catalyst materials". Direct funding from **MEL Chemicals/UK**	01.09.2013–30.06.2018	**180.000 €**	Scientific responsible

(*) funding in this project pertains to the Department of Chemical Engineering, Univ. Patras

REVIEWER OF SCIENTIFIC JOURNALS: 277 invitations

"PCCP" (42×), *"Green Chemistry"* (34×), *"Journal of Catalysis"* (13×), *"Chemical Communications"* (48×), *"Applied Catalysis B, Environmental"*(15×), *"Applied Catalysis A"*(4×), *"Journal of Alloys and Compounds"* (2×), *"Analyst"* (4×), *"ACS Catalysis"* (1×), *Chemosphere* (2×), *Journal of Materials Science*(2×), *J. Hazardous Materials* (16×), *"Catalysis Today"* (3×), *"Coordination Chemistry Reviews"* (1×), *"Journal of the Electrochemical Society"* (6×), *"Industrial and Engineering Chemistry Research"* (2×), *"Dalton Transactions"*(8×), *Z.Natur.Forsch* (1×), *"Chemical SocietyReviews"* (2×), *Journal of Molecular Catalysis A* (2×), *Chemistry of Materials* (1×), *Journal of Physical Chemistry"* (7×), *Journal of Materials Chemistry (RSC* (3×), *"Applied Spectroscopy"* (2×), *"High Temperature Material Processes"* (1×), *New Journal of Chemistry(RSC)* (3×), *J. Chem. Eng. Data* (1×), *"Solid State Ionics"* (2 ×), *Proceedings of the 12th International Congress of Catalysis*(1×), *EUROPACAT 2009* (1×), *Chemical Engineering Journal* (1×), *Powder Technology*(1×), *RCS Advances* (24×), *Analytical Methods* (2×), *Catalysis Science & Technology* (2×), *Vibrational Spectroscopy* (1×), *JTICE* (1×), *Nanoscale* (1×), *Chemical Engineering Research & Design* (1×), *Catal. Communications* (5×), *Spectrochimica Acta* (1×), *Inorganic Chemistry*(1×), *ChemCatChem* (1×)	**277 times**
	Total : 277

- **Book reviewer**
  1. (Royal Society of Chemistry/2005: Modern Raman Spectroscopy: A Practical Approach, John Wiley & sons)
  2. Vibrational Spectroscopy in Chemistry and Polymer Science (Book proposal, Royal Society of Chemistry), 2008

CITATIONS and h-index

	Updated: January 2018
Citations (total)	**2155**
h – factor	**26**

SEMINARS – INVITED TALKS

- Institute of Inorganic Chemistry, The Norwegian Institute of Technology, Trondheim (NTH), 18 January 1988
- Institute of Industrial Electrochemistry, The Norwegian Institute of Technology, Trondheim (NTH), 4 February 1989
- Institute of Inorganic Chemistry, The Norwegian Institute of Technology, Trondheim (NTH), 24 October 1989
- Institute of Inorganic Chemistry, The Norwegian Institute of Technology, Trondheim (NTH), 3 February 1993
- Invited Talk, Nuclear Research Center "Demokritus", Institute of Physical Chemistry, Athens, Greece, 14 November 1997
- Invited Talk, (**Distinguished Scholar Lectureship**) School of Chemistry, The Queen's University of Belfast, United Kingdom, 26 April 1999
- Invited Talk, The Royal Danish Academy of Fine Arts, School of Conservation, Copenhagen , Denmark, 7 July 1999.
- Invited Talk, The Royal Danish Academy of Fine Arts, School of Conservation, Copenhagen , Denmark, 24 August 2005.
- Invited Talk, (plenary lecture) 2nd Panhellenic Symposium Green Chemistry and Sustainable Development , Patras, Greece, 2007 ("Ionic Liquids. Green Solvents for the Future and Sources of Innovation")
- Invited Talk, Chemistry Department, The Technical University of Denmark; "Structure and Reactivity/Performance of Catalytic Systems Studied by *in situ* and *operando* Raman Spectrpscopy", 13 June 2007.
- Invited Talk, Chemistry Department, The Technical University of Denmark; "On the configuration of MoO_x sites on alumina, zirconia and titania: Vibrational properties, molecular structure, vibrational isotope effects and structure/function relationships", 24 June 2011.
- Keynote Lecture: EUCHEM Conference on Molten Salts and Ionic Liquids: "Dissolution of metal oxides and reaction equilibria in molten salts and ionic liquids. Structure, stoichiometry and thermodynamics studied by high temperature Raman Spectroscopy", 6 August 2012
- Invited Lecture: 13th Panhellenic Catalysis Symposium: "Molecular structure of supported and mixed metal oxide catalysts: Configuration of oxometallic sites, temperature evolution and structural defects", Agios Athanasios Pellas, Greece, 17 October 2014
- Invited Talk: Chemistry Department, Fritz Haber Institute – Max Planck Gesselschaft, Berlin; "Molecular structure of supported and mixed metal oxide catalysts. Configurations of oxo-metallic sites, temperature evolution and structural defects", 8 April 2015.
- Invited Talk: Chemistry Department, University of Cyprus, "Morphology, structural defects and oxygen vacancies in ceria-based mixed metal oxides probed by in situ Raman spectroscopy", 18 June 2015

PUBLICATIONS in International peer-reviewed SCI journals

1. Raman Spectroscopic Studies of Vapor Complexation in the LCl_4-$POCl_3$ and LCl_4-$AlCl_3$ (L=Zr, Hf) Binary Systems.
   S. Boghosian, G. N. Papatheodorou, R. W. Berg and N. J. Bjerrum,
   Polyhedron, 1986, **5**, 1393

2. Evaluation of Stoichiometric Coefficients and Thermodynamic Functions Using Raman Spectroscopy. The Systems: ZrX_4-AlX_3 (X=Br, Cl)
   S. Boghosian and G. N. Papatheodorou,
   J.Phys.Chem., 1989, **93**, 415.

3. Crystal Structure and Infrared and Raman Spectra of $K_4(VO)_3(SO_4)_5$.
   R. Fehrmann, S. Boghosian, R. W. Berg, G. N. Papatheodorou, K. Nielsen and N. J. Bjerrum,
   Inorg.Chem., 1989, **28**, 1847.

4. Formation of Crystalline Compounds and Catalyst Deactivation During SO_2 Oxidation in V_2O_5-$M_2S_2O_7$ (M= K, Na, Cs) Melts.
   S. Boghosian, R. Fehrmann, N. J. Bjerrum and G. N. Papatheodorou,
   J.Catal., 1989, **119**, 121.

5. In-Situ High Temperature SERS Study of Ag Catalysts and Electrodes During Ethylene Epoxidation.
S. Boghosian, S. Bebelis, C. G. Vayenas and G. N. Papatheodorou,
J.Catal., 1989, **117**, 561.

6. Crystal Structure and Vibrational Spectra of $Na_2VO(SO_4)_2$.
R. Fehrmann, S. Boghosian, R. W. Berg, G. N. Papatheodorou, K. Nielsen and N. J. Bjerrum,
Inorg.Chem., 1990, **29**, 3294.

7. Oxide Complexes in Alkali-Alkaline Earth Chloride Melts.
S. Boghosian, Aa. Godo, H. Mediaas, W. Ravlo and T. Ostvold,
Acta Chem.Scand., 1991, **45**, 145.

8. The Crystal Structure of $NaV(SO_4)_2$.
R. Fehrmann, S. Boghosian, R. W. Berg, G. N. Papatheodorou, K. Nielsen and N. J. Bjerrum,
Acta Chem.Scand., 1991, **45**, 961.

9. Vaporization and Vapor Complexation in the Gold Chloride-Aluminum Chloride System
L. Nalbandian, S. Boghosian and G. N. Papatheodorou,
Inorg.Chem., 1992, **31**, 1769.

10.Characterization of Vapor Complexes Over Molten $POCl_3$-MCl_3 (M=Al, Ga) Mixtures. Raman Spectra and Thermodynamics.
S. Boghosian, D. A. Karydis and G. A. Voyiatzis,
Polyhedron, 1993, **12**, 771.

11.Crystal Structure and Spectroscopic Characterization of $CsV(SO_4)_2$. Evidence for an Electronic Raman Transition.
R. W. Berg, S. Boghosian, N. J. Bjerrum, R. Fehrmann, B. Krebs, N. Strater, O. S. Mortensen and G. N. Papatheodorou,
Inorg.Chem., 1993, **32**, 4714.

12.Raman Spectroscopic Characterization of High Temperature $MGaCl_8$ (M=Nb, Ta) Dinuclear Molecular Complexes in the Liquid and Gaseous State.
S. Boghosian and G. A. Voyiatzis,
Polyhedron, 1993, **12**, 2965.

13.Conductivity and Phase Diagram of the SO_2 Oxidation Catalyst Model System $M_2S_2O_7$-V_2O_5 (M=80%K +20%Na).
D. A. Karydis, S. Boghosian and R. Fehrmann,
J.Catal., 1994, **145**, 312

14.Vapor Complexation and Thermochemistry Over NaI-TbI_3 Mixtures: A Mass Spectrometric Investigation.
S. Boghosian and O. Herstad,
Polyhedron, 1994, **13**, 1639.

15.Spectrophotometric and ESR Spectroscopic Investigations of Vanadium Reduction Equilibria in the V_2O_5-$K_2S_2O_7$/SO_2-SO_3 System in the Temperature Range 430-480°C
D. A. Karydis, K. M. Eriksen, R. Fehrmann and S. Boghosian,
J.Chem.Soc. Dalton Trans., 1994, 2151.

16. Synthesis and Crystal Structure of $Na_3V(SO_4)_3$. Spectroscopic Characterization of $Na_3V(SO_4)_3$ and $NaV(SO_4)_2$.
S. Boghosian, R. Fehrmann, and K. Nielsen,
Acta Chem. Scand., 1994, **48**, 724.

17. Raman Spectra of Liquids and Glasses in the $LnCl_3$-$AlCl_3$ (Ln=Nd, Gd) Systems.
K. Murase, G. Adachi, G. D. Zissi, S. Boghosian and G. N. Papatheodorou,
J. Non-Cryst. Solids, 1994, **180**, 88.

18.Deactivation and Compound Formation in Sulphuric Acid Catalysts and Model Systems.
K. M. Eriksen, D. A. Karydis, S. Boghosian and R. Fehrmann,
J.Catal. , 1995, **155**, 32.

19. Synthesis, Crystal Structure Redetermination and Vibrational Spectra of β-$VOSO_4$.
S. Boghosian, K. M. Eriksen, R. Fehrmann and K. Nielsen,
Acta Chem. Scand. 1995, **49**, 703.

20. Vapor, Liquid and Solid Complexes in the $POCl_3$-$FeCl_3$ System.
S. Boghosian, G. A. Voyiatzis, and G. N. Papatheodorou,
J.Chem.Soc. Dalton Trans., 1996, 3405.

21.Rare Earth Halide Vapors and Vapor Complexes.
S. Boghosian and G. N. Papatheodorou**,** in *Handbook on the Physics and Chemistry of Rare Earths*, K. A.Gschneidner,Jr. and LeRoy Eyring Eds., North Holland, Elsevier, Amsterdam, 1996, **Vol. 23**, pp 435-496.

22. Catalytic Activity and Deactivation of SO_2 Oxidation Catalysts in Simulated Power Plant Flue Gases.
S. G. Masters, A. Chrissanthopoulos, K. M. Eriksen, S. Boghosian and R. Fehrmann,
J. Catal., 1997, **166**, 16.

23. Vanadium (V) Complexes in Molten Salts of Interest for The Catalytic Oxidation of Sulphur Dioxide
S. Boghosian, F. Borup and A. Chrissanthopoulos
Catal. Lett., 1997, **48**, 145.

24. Vibrational Modes and Structure of Vanadium (V) Complexes in M_2SO_4-V_2O_5 (M= K, Cs) Molten Salt Mixtures.
S. Boghosian,
J. Chem. Soc.,*Faraday Trans.*, 1998, **94**, 3463

25. The Crystal Structure and Spectroscopic Characterization of a green V(IV) compound, $Na_8(VO)_2(SO_4)_6$.
K. Nielsen, S. Boghosian, R. Fehrmann and R. W. Berg
Acta Chem. Scand., 1999, **53**, 15.

26. Electrochemical and Spectroscopic Investigations of the K_2SO_4-V_2O_5 Molten Electrolyte
D. S. Schmidt, J. Winnick, S. Boghosian and R. Fehrmann
J. Electrochem. Soc., 1999, **146**, 1060.

27. Determination of Stoichiometry of Solutes in Molten Salt Solvents by Correlation of Relative Raman Intensities
S. Boghosian and R. W. Berg
Applied Spectroscopy, 1999, **53**, 565.

28. Progress on the Mechanistic Understanding of SO_2 Oxidation Catalysts.
O. B. Lapina, B. Bal'zhinimaev, S. Boghosian, K. M. Eriksen and R. Fehrmann,
Catal. Today, 1999, **51**, 469.

29. $CoCl^+$: Unique in All of Molten Saltdom
S. Boghosian, P. Tumidajski, M. Blander and D.S. Newman
Metal. Mat. Trans. B, 2000, **31B**, 597.

30. Rhenium (III) chloride vaporization and vapor complexation in the rhenium (III) chloride – aluminum (III) chloride system
A. Christodoulakis, K. Maronitis and S. Boghosian
Phys. Chem. Chem. Phys., 2001, **3**, 5208.

31. Structure of vanadium oxosulfato complexes in V_2O_5-$M_2S_2O_7$-M_2SO_4 (M=K,Cs) melts. A high temperature spectroscopic study
S. Boghosian, A. Chrissanthopoulos and R. Fehrmann
J. Phys. Chem. B, 2002, **106**, 49.

32. First *in situ* high temperature Raman study of vanadium oxide based SO_2 oxidation catalysts.
I. Giakoumelou, R. M. Caraba, V. I. Parvulescu and S. Boghosian
Catal. Lett., 2002, **78**, 209.

33. NO Reduction with NH_3 over Chromia-Vanadia Catalysts Supported on TiO_2: an *in-situ* Raman Spectroscopic Study.
I. Giakoumelou, Ch. Fountzoula, Ch, Kordulis and S. Boghosian
Catal. Today, 2002, **73**, 255.

34. Crystal Structure and Spectroscopic Properties of $Na_2K_6(VO)_2(SO_4)_7$.
D. A. Karydis, S. Boghosian, K. Nielsen, K. M. Eriksen, and R. Fehrmann,
Inorg. Chem., 2002, **41**, 2417.

35. Molecular structure of supported molten salts catalysts for SO_2 oxidation
A. Christodoulakis and S. Boghosian,
J. Catal., 2003, **215**, 139.

36. Selective catalytic reduction CR of NO with NH_3 over mesoporous V_2O_5-TiO_2-SiO_2 catalysts
V. I. Parvulescu, S. Boghosian, V. Parvulescu, S. M. Jung and P. Grange,
J. Catal., 2003, **217**, 172.

37. Molecular Structure and Reactivity of Vanadia Based Catalysts for Propane Oxidative Dehydrogenation Studied by *in-situ* Raman Spectroscopy and Catalytic Activity Measurements
A. Christodoulakis, M. Machli, A. A. Lemonidou and S. Boghosian,
J. Catal., 2004, **222**, 293.

38. Crystal Structure and Spectroscopic Properties of $CsVO_2SO_4$.
S. B. Rasmussen, S. Boghosian, K. Nielsen, K. M. Eriksen and R. Fehrmann,
Inorg. Chem., 2004, **43**, 3697.

39. New vanadia-mesoporous catalysts for the oxidation of SO_2 in diluted gases
C. Paun, S. Boghosian, V. Parvulescu, Ph. Massiot, M. A. Centeno, P. Grange, V.I. Parvulescu,
Catal. Today, 2004, **91-92**, 33.

40. Vanadia-silica and vanadia-cesium-silica catalysts for oxidation of SO_2.
V. I. Parvulescu, C. Paun, V. Parvulescu, M. Alifanti, I. Giakoumelou, S. Boghosian, S. B. Rasmussen, K. M. Eriksen and R. Fehrmann,
J. Catal., 2004, 225, 24.

41. Oxidation of sulfur dioxide over supported solid V_2O_5/SiO_2 and supported molten salt V_2O_5-Cs_2SO_4/SiO_2 catalysts: Molecular structure and reactivity
I. Giakoumelou, V. Parvulescu and S. Boghosian
J. Catal., 2004, **225**, 337.

42. Establishing the gas phase dimerization of niobium (V) and tantalum (V) fluoride by quantitative Raman spectroscopy
S. Boghosian, E. A. Pavlatou and G.N. Papatheodorou, *Vibrational Spectroscopy*, 2005, **37**, 133.

43. Molecular structure and catalytic activity of V_2O_5/TiO_2 catalysts for the SCR of NO by NH_3: In situ Raman spectra in the presence of O_2, NH_3, NO, H_2, H_2O and SO_2
I. Giakoumelou, Ch. Fountzoula, Ch. Kordulis and S. Boghosian
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