

**Roberto Acevedo, PhD (13-09-2025)**

“If what you are going to say is not more beautiful than silence, it is preferable that you smile and keep silent,”

Full Professor

Universidad de Chile, Universidad Mayor, Universidad San Sebastián

Google Scholar:

[https://scholar.google.com/citations?view\\_op=list\\_works&hl=es&user=RvtSCSoAAAAJ](https://scholar.google.com/citations?view_op=list_works&hl=es&user=RvtSCSoAAAAJ)

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Scopus Author ID: 7003836387

<https://researchers.uss.cl/es/persons/roberto-acevedo-llanos/>

## **I.-) Personal Data**

Full name: Roberto Acevedo

Date of birth: November 30, 1950

Address: Horacio Aravena A. Ex Pasaje 1. Casa 2950 CP. 7810000. Santiago

Nationality: Chilean

## **II.-) Undergraduate and Postgraduate Studies:**

(2.1) Universidad de Chile. Facultad de Ciencias. Licenciado en Filosofía con mención en Química (1974)

(2.2) University of London. King's College and Birkbeck Colleges. Supervisors: Professor S.F.Mason. F.R.S. and Colin.D.Flint.. U.K. (1978-1981).

(2.3) University of Virginia. Charlottesville. Virginia. U.S.A. Postdoctoral Studies: Spectroscopy of Lanthanide Complex Ions in Elpasolite type crystals. Department of Chemistry (1982).

### **III.-) Academic Distinctions and Research Position held Abroad:**

-Visiting Fellowship. University of Virginia, 1982

-Honorary Research Fellow : Birkbeck College. University of London. U.K.: 1984, 1985, 1990 and 1991

-Bursary of the E.C. DG-XII: Birkbeck College. University of London, 1991 (six months)

-Visiting Scholar : Department of Chemistry. University of Virginia, 1993

-Invited Speaker : Advanced Study Institute. NATO - A.S.I., Vibronic Processes in Inorganic -Chemistry. Riva del Sole, Italy, 1988

-Visiting Professor: Department of Biology and Chemistry. City University of Hong Kong, 1996

-Member of the Editorial Board: Asian Journal of Spectroscopy.

-Co - Editor. The Section of Chemistry. "Ciencia al Día"  
<http://www.ciencia.cl/CienciaAlDia/>

-Incorporated to Who's Who in the World. Marquis Who is Who. 15 th Edition, 1997

-Incorporated to Who's Who in the World. Marquis Who is Who. 16 th Edition, 1999

-Incorporated to International Who is Who of Intellectuals. 13 th Edition. Cambridge. U.K., 1998

-Incorporated to Dictionary of International Biography. 27 th Edition. Cambridge. U.K., 1998

- Incorporated to 2000 Outstanding Intellectuals of the 20th Century. International Biographical Centre. Cambridge, U.K, 1999
- Honorary Member of the International Biographical Centre. Advisory Council, 1999
- Editor en Jefe. Revista Ciencia Abierta. <http://cabierta.uchile.cl> ISSN: 0717-8948 (revista culmina sus actividades en Abril, 2007).
- Global Chief Editor: Journal Inglo Mayor. <http://www.inglomayor.cl> ISSN:0719-7578
- Regional Editor. Material Science. International Journal on the Physics and Chemistry of Condensed Materials and Their Applications. Address for correspondence: Institute of Low Temperature and Structure Research. Polish Academy of Sciences. 50-950 Wroclaw. P.O.Box. 937. Okolna, Poland.
- Member of the New York Academy of Sciences.
- Editor: Ciencia y Tecnología ([www.roberto-acevedo.cl](http://www.roberto-acevedo.cl) ).
- Member of the Editorial Committee. Journal of Social Business (J.S.B.). An interdisciplinary quarterly journal. [www.journalofsocialbusiness.net](http://www.journalofsocialbusiness.net) (2016) ISSN:2045-1083
- Member of the International Advisory Committee National Seminar on the Role of Microalgae in waste-water treatment. Convention Hall Campus—II, S.O.A. University Date: 21 th February, 2017. Organized by Multi-Disciplinary Research Cell Siksha ‘O’ Anusandhan University. Khandagiri Square. Bhubaneswar-751030, Odishia. India.
- Member of the Organizing Committee 10 th International Conference on Chemistry Education and Research June 21-22, 2018. Oslo. Norway  
(<https://chemistryeducation.chemistryconferences.org/abstract-submission.php>)
- Member of the Editorial Board of many other peer review journals.

#### IV.-) Academic Positions:

- (4.1) Profesor Titular. Jornada Completa Docente. Universidad San Sebastián. Agosto 2018- A la fecha.
- (4.2) Director de Investigación y Desarrollo. Vicerrectoría de Desarrollo. Universidad Mayor (2012-2017)
- (4.3) Decano. Facultad de Ingeniería. Universidad Mayor (2007-2012)
- (4.4) Director de Investigación y Postgrados. Facultad de Ingeniería. Universidad Mayor (2007-2012).
- (4.5) Docente e Investigador. Facultad de Ciencias Físicas y Matemáticas. Universidad de Chile (1974-2007)
- (4.6) Profesor de Primera Categoría. Facultad de Ciencias Físicas y Matemáticas. Universidad de Chile. Junio 01,1991 a la fecha.
- (4.7) Profesor Titular. Universidad de Chile. Junio 1991 a la fecha.
- (4.8) Profesor Titular. Universidad Mayor. Agosto 2009 a la fecha.
- (4.9) Miembro de la Comisión Normativa Transitoria de la Universidad de Chile (actual Senado Universitario). 4,5 años. Comisión de Estatutos.
- (4.10) Miembro del Consejo de la Facultad de Ciencias Físicas y Matemáticas. Universidad de Chile. Período superior a 8 años, hasta Marzo, 2007.

#### **V.-) Research Interest**

\*Linear and no linear optics in new inorganic luminescent materials of the rare earths. Dynamics of crystals.

\*Cooperative effects, Jahn - Teller (Static and dynamics), Pseudo Jahn - Teller in coordination compounds of the transition metal and lanthanide complex ions

\*Scientific Psychology

\*Advanced Studies in Higher Education

\*Social Business, Social Responsibility and Entrepreneurship.

\* Mining developments and applications

\* A new model for the periodic table.

## VI.-) **Research Projects:**

(6.1) Molecular Physics: Molecular spectroscopy in both organic and inorganic compounds. Research grant: 1870310. Fondecyt (1987)

Molecular Physics: dynamic of crystals. Research grant: 1880623. Fondecyt. (1987-1988-1990)

(6.2) Molecular Physics. One and Two photon spectroscopy in solid state physics. Experimental and theoretical studies. Coordination compounds of the transition metal and lanthanide complexes in cubic crystals. Research grant: 1920935. Fondecyt (1992-1993-1994)

(6.3) Molecular dynamics. Synthesis, Structural studies, electric and optic properties in luminescent materials. Theoretical studies and computing simulations in lattice dynamics. Research grant: 1950668. Fondecyt (1995-1996-1997).

(6.4) Spectroscopy in the solid state. Experimental and theoretical studies in the antifluorite type crystals. Research grant: 1981207. Main researcher: R. Acevedo. (1998-1999-2000).

(6.5) Nuclear and no nuclear materials. Joint project: Chilean Nuclear Energy Commission and the Division of Theoretical Chemistry. Department of Basic Chemistry. Faculty of Physical and Mathematical Sciences. University of Chile. (1998-2002).

(6.6) International Cooperation Research Project. Fondecyt. grant: 7980056 (1998-1999-2000). Main

Researchers: R.Acevedo.

(6.7) New Materials, Theoretical and Experimental Aspects. Grant 2049. Universidad Diego Portales (Noviembre de 2000 a Noviembre de 2001). Main Researcher: R. Acevedo

(6.8) Ion-Phonon Coupling in Crystal Systems. Grant. 2062. Universidad Diego Portales (Enero, 2002 a Enero, 2003). Main Researcher: R.Acevedo

(6.9) Aspectos formales en dinámica del estado sólido y procesos de interés tecnológico. Octubre 2005-Octubre 2006. Project. VRA-UDP: 10. 03.25.008.

(6.10) Nuclear and no nuclear materials. Joint project: SKB. Sweeden, Comisión Chilena de Energía Nuclear, La Reina and the Division of Theoretical Chemistry. Department of Material Science. Facultad de Ciencias Físicas y Matemáticas. Universidad de Chile, 2007-

## VII.-) **Biography Data**

Roberto Acevedo (R.A.), PhD is a Professor and Researcher in three main areas: Basic and Applied Technology, Entrepreneurship and Social Business, Scientific Psychology and Higher Education. In his academic career, he was promoted to full Professor in three Universities: Universidad de Chile (UCh), Universidad Mayor (UM) and Universidad San Sebastián (USS)

He has been appointed to various positions as an academician and administrator, including: Decano de la Facultad de Ingeniería (UM), Director de Investigación y Desarrollo (UM), Miembro de la Comisión Normativa Transitoria (UCh), and Miembro del Consejo de Facultad. (Facultad de Ciencias Físicas y Matemáticas. UCh), Director del Departamento de Química (Facultad de Ciencias Físicas y Matemáticas. UCh). As for his studies are concerned, he became Licenciado en Filosofía con mención en Química. Universidad de Chile (1974), PhD at both Birkbeck and King's Colleges. University of London (1981). Held a post-doctoral position at the Chemistry Department. Charlottesville. University of Virginia, USA (1982).

His academic distinctions include a postdoctoral position and fellowship at the University of Virginia, U.S.A. (1982), and the title of Honorary Research Fellow. The University of London. U.K. (1984, 1985, 1990, 1991), Bursary of the E.C. DG-XII (1991), Invited Speaker. Advanced Study Institute. NATO-ASI. Riva del Sole, Italy (1988), Invited speaker at the School of Business. Medgar Evers College. The City University of New York, U.S.A., Visiting Professor at the City University of Hong Kong (China), Wroclaw (Poland), New

York (U.S.A.), Louvain (Belgium), School of Business. The City University of New York (U.S.A.) and the University of London (U.K.).

Global Editor in Chief. Electronic Journal. Inglo Mayor ([www.inglomayor.cl](http://www.inglomayor.cl)) ISSN. 0719-7578, Editor of virtual library: [www.roberto-acevedo.cl](http://www.roberto-acevedo.cl), among several other academic distinctions.

R.A. has focused his attention in both undergraduate and postgraduate lecturing and research, in state of the art, focused on a broad number of undergraduate and postgraduate students in different topics in areas such as Linear and non-Linear Optics in New Inorganic Luminescent Materials of the Rare Earths, Dynamics of Crystals, Cooperative Effects, Jahn - Teller (Static and dynamics), Pseudo Jahn - Teller in Coordination Compounds of the Transition Metal and Lanthanide Complex Ions, Scientific Psychology, Advanced Studies in Higher Education, Social Business and Entrepreneurship and in Industrial and Applied Research in the Mining Industry in Chile. He has supervised numerous students, including 12 working towards their MSc and DSC degrees, as well as over 90 students pursuing their Professional Titles. RA is a member of the Board of Editors for several journals, including the Journal of Social Business (J.S.B.). [www.journalofsocialbusiness.net](http://www.journalofsocialbusiness.net), ISSN: 2045-1083, Global Chief Editor of the electronic magazines: Inglo Mayor ([www.inglomayor.cl](http://www.inglomayor.cl)), ISSN: 0719-7578, Chief Editor ([www.roberto-acevedo.cl](http://www.roberto-acevedo.cl)). Science and Technology ([www.roberto-acevedo.cl](http://www.roberto-acevedo.cl)) and, among other appointments, member of the International Advisory Committee. National Seminar on the Role of Microalgae in Wastewater Treatment, Odisha, India (February 2017). He has also been a member of the Organizing Committee. Chemistry and Education Research. Theme: Contemporary Advances and Innovations in Chemistry. Oslo-Norway. June 21-22, 2018. <https://chemistryeducation.chemistryconferences.org/organizing-committee.php>

His outcome in research may be divided into sections: (a) National Publications: 117, (b) Publications in International Congress: 42, (c) Publications in electronic journals: 148, (d) International peer review journals: over 200 publications, and (e) Author of 17 Books. Many Conferences delivered in Chile and Abroad.

## VIII.-) International publications (1981-2023)

### 1981

(1) Theoretical studies of the intensity mechanism of electronic transitions in coordination compounds

R.Acevedo

PhD Thesis. University of London, 1981

### 1982 None.

### 1983 None

(2) On the evaluation of the geometrical factors utilised in ligand polarisation calculations.

R.Acevedo, T.Meruane

Theoretica Chimica Acta (Berl.), 62, 30 (1983)

(3) Vibronic intensities in the electronic spectra of transition metal ions. I.- Crystal field calculations for the transition  ${}^2E_g \rightarrow {}^4A_{2g}$  of  $Cs_2MnF_6$

R.Acevedo, C.D.Flint

Molecular Physics, 49(5), 1065 (1983)

### 1984

(4) On the theory of radiative transitions in centrosymmetric complexes. A symmetry adapted crystal field approach

R.Acevedo, T.Meruane, J.R.Letelier

Theoretica Chimica Acta (Berl.), 64, 339 (1984)

(5) Normal co-ordinate analysis of the hexamminochromium (III) ion. A simplified model

R.Acevedo, G. Díaz

Spectroscopy Letters 16(3), 199 (1984)

(6) Vibronic intensities in the electronic spectra of transition metal ions. II.- Ligand polarization calculations for the  ${}^2E_g \rightarrow {}^4A_{2g}$  transitions of  $MnF_6^{-2}$

R. Acevedo, C. D. Flint

Molecular Physics, 53(1), 129 (1984)

## 1985

(7) Electronic factors in the non-radiative relaxation of transition metal ions. I.- Crystal field calculations for the ion.

R.Acevedo, C.D.Flint

Molecular Physics, 54(3), 619 (1985)

(8) Crystal field and ligand polarisation contributions to the electric dipole strengths of tetrahedral Cobalt (II) complexes

R.Acevedo, G.Díaz, C.D.Flint

J.C.S. Faraday Transaction II, 811861 (1985)

(9) Evaluation of the crystal field - closure - ligand polarization interference term for the vibronic intensities of centrosymmetric coordination compounds. A caveat and a correction

R. Acevedo, C.D. Flint

Molecular Physics, 56(3), 683 (1985)

(10) Normal coordinate analysis of the 25 - atom system in octahedral symmetry

R. Acevedo, G. Díaz, C. D. Flint

Spectrochimica Acta A, 41 (12), 1397 (1985)

## 1986

(11) The calculation of the electric dipole vibronic intensities in centrosymmetric coordination compounds, using a crystal field- closure- ligand polarization model.

R.Acevedo, C.D. Flint

Theoretica Chimica Acta (Berl.), 69(3), 225 (1986)

(12) Vibronic intensities in the electronic spectra of transition metal ions. Quadrupole - dipole and hexadecapole - dipole contributions to the vibronic intensity in octahedral transition metal compounds.

R.Acevedo, C.D.Flint

Molecular Physics, 58 (6), 1033 (1986)

(13) Normal coordinate analysis for the complex ions in and symmetries. Simplified molecular models.

R.Acevedo, G.Díaz

Spectroscopy Letters, 19 (6), 653 (1986)

(14) Full normal coordinate analysis and molecular dynamic parameters for the ion.

R.Acevedo, G.Díaz

Spectroscopy Letters, 19 (1), 73 (1986)

## 1987

(15) The theory of the radiative transitions in coordination compounds. I.- Centrosymmetric complex ions.

R.Acevedo, G. Díaz

An. Quím, 83, 135 (1987)

(16) The intensity of vibronic origins in transition metal ions

C.D.Flint, R.Acevedo

In Understanding Molecular Properties. Pages: 195-203. Editors : J.Avery, P.Dahl, A.E.,Hansen. D.Reidel Publishing Co, 1987

## 1988

(17) Vibrational wavenumbers and normal coordinate analysis. The ion

R.Acevedo, G. Díaz, C.D.Flint, P.A.Tanner

An.Quím, 84.B, 172 (1988)

(18) Vibrational analysis in coordination compounds. The ion in octahedral symmetry.

R.Acevedo, G.Díaz

An.Quím, 84. B, 176 (1988)

## 1989

(19) The theory of no radiative transitions in coordination compounds. I.- Centrosymmetric complex ions.

R.Acevedo, G. Díaz

An. Quím, 85, 37 (1989)

(20) On the evaluation of the electric dipole transition moments in non-centrosymmetric coordination compounds. A combined crystal field - closure - ligand polarization model.

R.Acevedo, G. Díaz, T.Meruane

An.Quím, 86, 467 (1989)

(21) General valence force field and molecular dynamic parameters for cubic lanthanide hexachloride - elpasolite crystals.

R.Acevedo, G. Díaz

Spectroscopy Letters, 21 (1), 19 (1988)

(22) Modulation of a generalised valence force field for the solid in the space group

R.Acevedo, E. Cortés

An. Quím, 85, 360 (1989)

(23) The general theory of radiative and non radiative transitions in centrosymmetric coordination compounds of the transition metal ions.

R.Acevedo. In Vibronic Processes in Inorganic Chemistry. NATO-ASI. Series C: Mathematical and Physical Sciences. Vol. 288. Pages: 139-194. Kluwer Academic Publishers, 1989

## 1990

(24) Normal co-ordinate analysis for the solid. A simplified molecular model in the factor group  $D_{3d}$

R. Acevedo, G. Díaz

An. Quím, 86 (7), 744 (1990)

(25) On the evaluation of the electric dipole transition moments in non centrosymmetric coordination compounds. A combined crystal field - closure - ligand polarisation method.

R.Acevedo, G. Díaz, T.Merueane

An. Quím, 86 (5), 467 (1990)

(26) Vibronic intensities in the electronic spectra of transition metal ions. VII.- The  $\Gamma_8(^2T_{2g}) \rightarrow \Gamma_8(^4A_{2g})$  electronic transition of the  $ReBr_6^{2-}$  in the  $Cs_2ZrBr_6$

R.Acevedo, G. Díaz, J.R.Letelier, C.D.Flint

Molecular Physics, 71, 1063 (1990)

## 1991

(27) Intermolecular force field and mean amplitudes of vibrations for the twenty five atom system in the octahedral point molecular group

R.Acevedo, G. Díaz, M.Campos-Vallette, B.Weiss

Spectrochimica Acta, 47. A (3), 355 (1991)

(28) Vibronic intensities in the electronic spectra of transition metal complex ions. VIII. Vibrational co-ordinates for octahedral ions and their application to the transition of ion.

R.Acevedo, G. Díaz, S.O.Vásquez, C.D.Flint

Theoretica Chimica Acta (Berl.), 79, 349 (1991)

(29) Vibronic intensities in the electronic spectra of transition metal complex ions. IX.- Experimental studies of the relative vibronic intensities in the transition of the in.

R.Acevedo, S.O.Vásquez, C.D.Flint

Molecular Physics, 74 (4), 843 (1991)

(30) Vibronic intensities in the electronic spectra of transition metal complex ions. X.- Second order Herzberg - Teller contributions to the vibronic intensity of the transition in

R.Acevedo, S.O.Vásquez, C.D.Flint

Molecular Physics, 74 (4), 853 (1991)

**1992** None

**1993** None

**1994**

(31) Vibronic intensities in centrosymmetric lanthanide complex ions. I.- A combined crystal field - ligand polarisation approach

R.Acevedo, T.Meruane, E. Cortés, S.O.Vásquez, C.D.Flint

Theoretica Chimica Acta (Berl.), 88, 99 (1994)

(32) Higher order vibronic interactions in centrosymmetric coordination compounds of the transition metal ions.

R.Acevedo, S.O.Vásquez

An. Quím, 90 (1), 38 (1994)

(33) Radiative processes in centrosymmetric lanthanide complex ions. I.- A general formalism. Relaxation of the closure approximation.

R.Acevedo, E. Cortés, T.Meruane, S.O.Vásquez, C.D.Flint

An. Quím, 90, 334 (1994)

(34) Radiative processes in centrosymmetric lanthanide complex ions. II.- A symmetry adapted vibronic crystal field - closure formalism.

R.Acevedo, E. Cortés, T.Meruane, S.O.Vásquez, C.D.Flint

An. Quím, 90, 339 (1994)

(35) Vibronic intensities in coordination compounds. Phases and vibrational coordinates.

R.Acevedo, S.O.Vásquez, M.Passman

An. Quím, 90, 237 (1994)

## **1995**

(36) Spectral intensities for the system

R.Acevedo, T.Meruane, E. Cortés, V.Poblete

An. Quím, 91 (7,8), 479 (1995)

(37) Synthesis and X-ray powder diffraction study of the elpasolite

R.Acevedo, V.Poblete

Journal of Powder Diffraction, 10 (3), 241 (1995)

(38) Ligand polarisation vibronic intensities in the electronic spectra of centrosymmetric coordination compounds of the transition metal ions. The ion in the octahedral point molecular group

R.Acevedo, S.O.Vásquez

An. Quím, 91 (7,8), 526 (1995)

## 1996

(39) Vibronic intensities in the absorption spectra of

R.Acevedo, P. A.Tanner, T. Meruane, V.Poblete

Physical Review B, 54 (6), 3976 (1996)

(40) Magnetic properties in Inorganic Materials

R.Acevedo, T.Meruane, V.Poblete, J.Pozo

In Magnetism, Magnetic Materials and Their Applications. Editors: F.Leccabue, V. Sagredo. Pages: 241-244. World Scientific. Singapore, 1996

(41) Dynamical Behaviour of the Soliton Instability in the Planar Ferromagnet

J.Pozo, R. Acevedo, T.Meruane

In Magnetism, Magnetic Materials and Their Applications. Editors: F.Leccabue, V. Sagredo. Pages: 330-334. World Scientific. Singapore, 1996

## 1997

(42) A vibronic crystal field - ligand polarisation model and applications to the and complex ions in octahedral symmetry.

R.Acevedo, C.D.Flint, T.Meruane, G.Muñoz, M.Passman, V.Poblete

Journal of Molecular Structure (Theochen), 390, 109 (1997)

## 1998

(43) V. Poblete, R. Acevedo, P.A. Tanner:

*Spectroscopic studies, theoretical models and structural characterization.*

I.-The elpasolites  $\text{Cs}_2\text{NaLnCl}_6$ , where  $\text{Ln}^{3+} = \text{Er}^{3+}, \text{Yb}^{3+}$ . Revista Mexicana de Fisica 09/1998; 44:29-31.

(44) Spectroscopic Studies: Theoretical Models and Structural Characterisation

II.- Synthesis and X-ray Powder Diffraction of the elpasolite

V.Poblete, R. Acevedo

Rev.Mex.Fís, 44.S1, 32-34(1998)

(45) Spectral Intensities in Cubic Systems

I.- Progressions based upon odd parity vibrational modes

R. Acevedo, S.O.Vásquez, T.Meruane, V.Poblete, J.Pozo

Rev.Mex.Fís, 44.S1, 35-37(1998)

(46) Spectral Intensities in Cubic Systems

II.- The system in cubic elpasolite crystals

R. Acevedo, T.Meruane, V.Poblete

Rev.Mex.Fís, 44.S1, 38-40(1998)

(47) R. Acevedo, O. Hurtado, T. Meruane, G. Navarro, V. Díaz, J. Pozo:

*Spectral intensities in cubic systems. III. The Cs<sub>2</sub>NaEuCl<sub>6</sub> system.* Revista Mexicana de Física 09/1998; 44:41-43.

(48) R. Acevedo, O. Hurtado, T. Meruane, G. Navarro, V. Díaz, J. Pozo:

*Spectral intensities in cubic systems. III. The Cs<sub>2</sub>NaEuCl<sub>6</sub> system.* Revista Mexicana de Física 09/1998; 44:41-43.

**1999** None

**2000** None

**2001**

(49) Intensidades Espectrales en Compuestos de Coordinación de los Metales de Transición

I.- Aplicaciones a Sistemas del tipo

R.Acevedo, G.Muñoz, T.Meruane.

Rev.Mex.Fís, 47(3), 207(2001)

(50) Vibronic Oscillator Strengths of in

P.A.Tanner, R. Acevedo, T.Meruane, O.F.Hurtado.

J.Alloys Compounds, 323-324, 718 (2001)

(51) Vibronic Intensities for in

R.Acevedo, G.Navarro, T.Meruane, P.A.Tanner, Y.Y.Zhao.

Rev.Mex.Fís, 47(3), 245(2001)

(52) Spectral intensities. I.- Ligand-framework coupling vibrations. The transition in the complex ion.

R.Acevedo, M.Passman, G.Navarro.

Acta Physica Polonica A, 99(2),215 (2001).

(53) Spectral Intensities. II.- The emission spectra for the system in the Fm3m space group.

R.Acevedo, T.Meruane, G.Navarro.

Acta Physica Polonica A, 99 (2),233 (2001)

(54) Absorptions and Emissions for the ion in the

R. Acevedo, O.F.Hurtado, C.Portillo, W.Strek.

Acta Physica Polonica A, 100(6), 829(2001)

## **2002**

(55) A Latticy Dynamic Model for the System in the Space Group

R.Acevedo, E.Cortés. Theoretical Chemistry Accounts, 107(4), 187 (2002)

## 2003

(56) Procesos Vibrónicos. Naturaleza e Implicancias Químicas.

R.Acevedo.

Investigación y Ciencia (Edición Española de Scientific American), pages: 54-61. Enero 2003. Prensa Científica. S.A.

(57) Spectral Intensities in Cubic Stoichiometric Elpasolites

The and Systems.

R.Acevedo, C.Portillo, G.Navarro, T.Meruane.

Advances in Quantum Chemistry, 44, 509-525,2003.

## 2004

(58) Spectral Intensities for the Emissions in the

R.Acevedo, A.Soto-Bubert, G.Navarro, T.Meruane, W.Strek

Acta Physica Polonica A, 105,233(2004)

## 2005

(59) Síntesis y Caracterización Estructural de las Elpasolitas Estequiométricas de y

G.Navarro, R.Acevedo, A.Soto-Bubert, V.Martín

Rev.Méx.Fís, 51(1),5 (2005)

(60) Métodos Vibrónicos Generalizados: Aplicaciones a sistemas del tipo elpasolitas estequiométricas

R.Acevedo, A.Soto-Bubert, C.Portillo, T.Meruane

Rev.Mex.Fís, 54(1),330(2005).

**2006** None

**2007**

(61) A new approach and some criteria to deal with the theory of the normal modes of vibrations in the elpasolite stoichiometric type systems. Short range intramolecular interactions.

Roberto Acevedo, Andrés Soto-Bubert, Paul Bosh, Wieslaw Streck.

Journal of Molecular Structure, 843(1-3),116(2007)

(62) Generalized vibronic methods and applications to the lanthanide type systems.

R.Acevedo,A.Soto-Bubert, G.Navarro,T.Meruane, W.Streck

Asian Journal of Spectroscopy, 11(1),1, (2007)

**2008**

(63) Spectral intensities in trivalent lanthanide systems. Applications to the and the crystals.

Roberto Acevedo, Andrés Soto-Bubert, Paul Bosch, Wieslaw Streck

Journal of Alloys and Compounds, 461(1-2),53(2008)

(64) Theory of the normal modes of vibrations in the lanthanide type crystals.

R.Acevedo, A. Soto-Bubert. J.Phys.Conf. Ser. 134(2008) 012024

(65) On the theory of interactions potentials in ionic crystals

R. Acevedo, A.Soto-Bubert. J.Phys.Conf. Ser. 134(2008) 012025

(66) Spectral intensities for the and the systems.

R.Acevedo, A.Soto-Bubert, G.Navarro. 2008 J.Phys.Conf. Ser. 134(2008) 012026

(67) Synthesis and characterization of lepidocrocite and its potential applications in the adsorption of pollutant species.

G.Navarro, R.Acevedo, A.Soto-Bubert, M.Herane. J.Phys.Conf. Ser. 134(2008) 012023

## **2009**

(68) On the theory of interaction potentials ion ionic crystals. Applications to the thermodynamics of the lanthanide type crystals.

R.Acevedo, A.Soto-Bubert, MGE.Valerio, W.Strek

Asian Journal of Spectroscopy,13,43 (2009)

## **2010**

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Andres Soto-Bubert<sup>1</sup>, Shajahan Shanavas<sup>2</sup>, Roberto Cabrales<sup>3</sup> and

Roberto Acevedo

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(174) Impact of Fleet Allocation on Production Indicators in Surface Mining

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(175) Analytical functions associated with the heat capacities  $CP(T)$ . Relevant Species in the Copper metallurgy

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Monika Bhattu<sup>1</sup>, Roberto Acevedo, and A. H. Shnain

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(199) Pharmaceutical Applications of Eucalyptol in the Pharmaceutical Industry

R. Acevedo

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(200) Viscosity modelling of chlorinated brines in three-component systems with a continuously variable temperature range between 293-323 K

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(203) Environmental Remediation in Agri-Food Industry Using Nanotechnology and Sustainable Strategies Pág. 81-94.

(204) Application of functional nanomaterials in photocatalysis, air pollutants degradation, hydrogen production, and carbon dioxide reduction.

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(218) An Efficient Synthesis of 9-phenyl -3,4-dihydrocridin-1(2H)-one analogues: Crystal structures and theoretical physicochemical studies

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(220) Exploring Motivation and Learning Factors in Digital Media Through the Lens of Activity Theory and Behavioural Influence

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(221) Tiny ML-Enabled Energy-Efficient Intrusion Detection System for Sustainable IoT Security in Green Cybersecurity Ecosystems

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(222) Graphene-Inspired Neural Mapping for Anticipating Seismic Shifts Across Continental Fault Zones Roberto Acevedo, Araceli Rodriguez

International Conference on Electrical Engineering and Informatics

13-15, November, Malaysia, 2025

(224) Diffusion-Driven Framework for Reconstructing Archaeological Artifacts from Fragmented Historical Remnants Roberto Acevedo, Matias Pavez

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(225) Contrastive Fusion Network for Interpreting Multimodal Emotional Cues within Interactive Theatre Performances Roberto Acevedo, Diego Onetto

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(226) Generative Vision Paradigm for Reanimating Extinct Species Illustrations Through Paleontological Museum Archives Roberto Acevedo, Tamara Roblero

(227) Attention-Oriented Pathfinding for Coordinating Autonomous Maritime Fleets Across Polar Shipping Routes Roberto Acevedo, Laura Spinelli

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## **IX.-) Books**

(1) Strategic Management and Leadership Concepts in Mergers & Acquisitions a Social Business View (In Amazon,2019)

Roberto Acevedo, Bernardo Javalquinto

(2) Light Manual for Strategic Management and Leadership Concepts In Mergers & Acquisitions A Social Business Vision (In Amazon,2019)

Roberto Acevedo, Bernardo Javalquinto (2021)

(3) Apuntes de Termodinámica Aplicada a la Minería. ICMI E 003

Andrés Soto-Bubert, Roberto Acevedo Llanos, Gustavo Navarro Ahumada (2021)

(4) Apuntes de Química General. Estructura Atómica y Molecular.

Andrés Soto Bubert, Roberto Acevedo Llanos (2021)

(5) Potenciales de Interacción en Cristales Iónicos. Aplicaciones en Termodinámica de Elpasolitas Estequiométricas

Andrés Soto Bubert, Roberto Acevedo Llanos (2021)

## **X). Proyectos de Vinculación con el Medio (VcM). Universidad San Sebastián. VcM**

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## **XI.-) Recent Conferences Delivered and Supervisor of undergraduate Students**

### **2016**

Conference Delivered, 2016. Exploring Corporate Social Responsibility with the Global Community. Medgar Evers College. The City University of New York. THE UNITED STATES OF AMERICA. June 14th-17th, 2016

(1) Corporate Social Responsibility and its Value to the Global Community. Plenary Discussion # 1. 10.30am-11.15 am. June 14 th, 2016

Roberto Acevedo, Roger Kaufman

(2) Corporate Social Responsibility Throughout the Global Community: Models for New Entrepreneurs.

Roberto Acevedo, Michael Short, Mickael Peck, Wayne Brown. 12.15 pm-1.30 pm

(3) Collaboration for Social Enterprise Curriculum

Roberto Acevedo, Shirley Grant-Williams, Jacqueline Kisato

(4) Where do we go From Here: Implementation of Global Network linking CSR with New Entrepreneurs

Roger Green, Michael Short, Erastus Mong'are, Roberto Acevedo. 11.45am-12.30pm

(5) Closing Remarks

Jo-Ann Rolle, Danielle Moss, Roberto Acevedo, Erastus Mong'are.

(6) Preparing Students for Entrepreneurship Careers

Block 1 Friday, October 14th, 2016 01.30 PM-02.50 PM

ACSSP. Region 1 Fall Conference. October 14 th and 15 th, 2016.

### **2018**

(7) Renio. Un desafío tecnológico.

Erick Fabián Montecinos Castañeda. Supervisor. Roberto Acevedo. Facultad de Ingeniería y Tecnología. Universidad San Sebastián.

## **2019**

(8) The future and learning in the unscaled economy.

J.D.Rolle, J.Kisato,M.Crump,A.Reid,R.Acevedo, N.Rock

Daffodil International University. Bangladesh. ICGEEE, 2019

(9) Fisicoquímica de Uranio

Constanza Valentina González Acuña. Supervisor. Roberto Acevedo. Facultad de Ingeniería y Tecnología. Universidad San Sebastián.

(10) Cerio y Praseodimio. Aplicaciones Tecnológicas

Diego Ignacio Cortés Orrego. Supervisor. Roberto Acevedo. Facultad de Ingeniería y Tecnología. Universidad San Sebastián.

(11) Propiedades fisicoquímicas en La y Nd y, análisis económico-tecnológico de la industria de las tierras raras

Miguel Herrera Cifuentes. Supervisor. Roberto Acevedo. Facultad de Ingeniería y Tecnología. Universidad San Sebastián.

(12) Desalinización del agua de mar mediante el método de congelamiento. Fusión para faenas mineras. II.-Región de Chile

Milagros Estefanía Rosas Nuñez. Supervisor. Roberto Acevedo. Facultad de Ingeniería y Tecnología. Universidad San Sebastián.

(13) Investigación y Análisis de estructuración de lantánidos y su aplicación a la industria minera

Fernando Andrés Jiménez Ortega. Supervisor. Roberto Acevedo. Facultad de Ingeniería y Tecnología. Universidad San Sebastián.

## **2020**

(14) Business trends in the unscaled economy. Global trends in Business Practices and Management Economy.

J.D.Rolle, J.Kisato,M.Crump,A.Reid,R.Acevedo, N.Rock

Bhubaneswar., Odishia. India, 2020.

(15) Recuperación de aguas lluvias por el fenómeno “invierno antiplánico” con la ayuda geológica y geográfica desde Calama hasta San Pedro de Atacama y utilización de éstas en la minería cercana.

Srta. Victoria Andrea Anza Vergara Supervisor. Roberto Acevedo. Facultad de Ingeniería y Tecnología. Universidad San Sebastián.

(16) Desalinización y técnicas analíticas de purificación de agua marina

Srta. Maria José Martínez Stuardo. Supervisor. Roberto Acevedo. Facultad de Ingeniería y Tecnología. Universidad San Sebastián.

(17) Técnicas especiales de instrumentación y caracterización de materiales en minería

Sr. Sebastián Benjamín Ulloa Araneda. Supervisor. Roberto Acevedo. Facultad de Ingeniería y Tecnología. Universidad San Sebastián.

(18) Energías renovables no convencionales (ERNC) y influencia en la Minería

Sr. Felipe Rodrigo Cañas Quintanilla. Supervisor. Roberto Acevedo. Facultad de Ingeniería y Tecnología. Universidad San Sebastián.

(19) Producción de energía a partir de aguas residuales

Sr. Sebastián Andrés Norambuena Barrera Supervisor. Roberto Acevedo. Facultad de Ingeniería y Tecnología. Universidad San Sebastián.

(20) Concentración de Zeolita a partir de Toba Zeolitizada de Quinamávida”. Ing. Sergio Moreno, MSc. Jaime Calderón, MSc. Vlamir Muñoz, Dr. Andres Soto- Bubert, PhD Roberto Acevedo. Universidad San Sebastián. 70° Convención del Instituto de Ingenieros de Chile. 20.25, November,2020

(21) Reflexiones sobre desafíos en la Educación Superior en Minería". Dr. Andrés Soto-Bubert, MSc. Vlamir Muñoz, PhD Roberto Acevedo. Universidad San Sebastián. 70° Convención del Instituto de Ingenieros de Chile. 20.25, November,2020

## **2021**

(22) Energías Renovables no Convencionales (ERNC) como Motor Energético para la Minería Nacional.

Felipe Rodrigo Cañas Quinta. Supervisor. Roberto Acevedo

(23) Desalinización de agua de mar, mediante membranas de óxido de Grafeno para faenas mineras en Antofagasta

María José Martínez Stuardo. Supervisor. Roberto Acevedo

(24) Producción de Energía a partir de aguas residuales

Sebastián Andrés Norambuena Barrera. Supervisor. Roberto Acevedo

(25) Técnicas Especiales de Instrumentos y Caracterización de Materiales en Minería

Sebastián Benjamín Ulloa Araneda. Supervisor. Roberto Acevedo

(26) Estudio de Factibilidad de uso de agua lluvia causada por el invierno Altiplánico en la gran Minería del Cobre en la Región de Antofagasta

Victoria Andrea Anza Vergara. Supervisor. Roberto Acevedo

(27) Reutilización de aguas grises en aplicación en Campamentos Mineros y Sector Inmobiliario general

Esteban Alejandro Sepúlveda Muñoz. Supervisor. Roberto Acevedo

### (28) Proyectos de título

NRC	Semestre	Estudiante	Nombre proyecto de título
10431-ICMI 1033	Segundo semestre 2018	Erik Montecino	Renio. Un desafío tecnológico.
		Daniel Álamos	Chilean Export of Lithium Carbonate. Production Chain and Market Variables
		Luciano Altamirano	Experimental Study Recovery Potassium by leaching a mixture salt Halita- Silvita, using saturated brine Halite agent leached like
21248-ICMI 1033	Primer semestre 2019	Fernando Jiménez	Investigación y Análisis de estructuración de lantánidos y su aplicación a la industria minera

15543 ICMI J004	Segundo semestre 2020	Felipe Cañas	Energías renovables no convencionales (ERNC) y influencia en la Minería
		Sebastián Norambuena	Producción de energía a partir de aguas residuales
		Sebastián Ulloa	Técnicas especiales de instrumentación y caracterización de materiales en minería
		Victoria Anza	Recuperación de aguas lluvias por el fenómeno “invierno antiplánico” con la ayuda geológica y geográfica desde Calama hasta San Pedro de Atacama y utilización de éstas en la minería cercana.
		María Martínez	Desalinización y técnicas analíticas de purificación de agua marina
23864- ICMI J004	Primer semestre 2021	Esteban Sepúlveda	Reutilización de aguas grises en aplicación en Campamentos Mineros y Sector Inmobiliario general
9831- ICMI J004	Segundo semestre 2021	Elizabeth Cubillos	
		Ángel Granados	
		Eduardo Venegas	
		Rodrigo Cordero	
10255- ICMI J004	Segundo semestre 2022	Ricardo Castro	
		Isidora Garrido	
		Karoly Hueico	

		Sebastián Duarte	
		Rodrigo Pavez	
25906- ICMI J004	Primer semestre 2023	Benjamín Ramírez	
ICMI J004	Primer semestre 2024		
ICMI J004	Primer semestre 2024		

**(29) Cursos dictados**

NRC	Nombre curso	Escuela	Carrera	Año
10165- ICMI 1035	Minería Recursos no Metálicos	Ingeniería y Tecnología	ICMI	2018
10431- ICMI 1033	Proyecto de titulo	Ingeniería y Tecnología	ICMI	2018
10413- ICMI 1010	Fisicoquímica	Ingeniería y Tecnología	ICMI	2018
6154- ICIV 1003	Ingeniería de materiales	Ingeniería y Tecnología	ICIV	2018
14355- INGE 1428	Termo fluidos	Ingeniería y Tecnología	INGE	2019
21248- ICMI 1033	Proyecto de titulo	Ingeniería y Tecnología	ICMI	2019

21247- ICMI 1033	Proyecto de titulo	Ingeniería y Tecnología	ICMI	2019
10710 ICMI 1010	Fisicoquímica	Ingeniería y Tecnología	ICMI	2019
11914 INGE 1428	Termo fluidos	Ingeniería y Tecnología	INGE	2020
11663 IESA G003	Introducción seminario de título	Ingeniería y Tecnología	IESA	2020
11889 ICMI E003	Termodinámica para la minería	Ingeniería y Tecnología	ICMI	2020
2569- INGE 1429	Ciencia de los materiales	Ingeniería y Tecnología	INGE	2020
15543 ICMI J004	Proyecto de titulo	Ingeniería y Tecnología	ICMI	2020
2402 ICMI F005	Fisicoquímica	Ingeniería y Tecnología	ICMI	2020
ICMIG005	Inglés de especialidad	Ingeniería y Tecnología	ICMI	2021
ICMIF005	Fisicoquímica	Ingeniería y Tecnología	ICMI	2021
ICMIJ004	Proyecto de título	Ingeniería y Tecnología	ICMI	2021
ICIAD002	Termofluidos	Ingeniería y Tecnología	ICIA	2021
ICMIJ004	Proyecto de título	Ingeniería y Tecnología	ICMI	2021

ICMIE001	Ciencia y resistencia de los materiales	Ingeniería y Tecnología	ICMI	2021
ICMIE003	Termodinámica para la minería	Ingeniería y Tecnología	ICMI	2021
ICMIE003	Termodinámica para la minería	Ingeniería y Tecnología	ICMI	2021
INGE1428	Termofluidos	Ingeniería y Tecnología	ICMI	2021
ICMIJ004	Proyecto de título	Ingeniería y Tecnología	ICMI	2021
INGE1428	Termofluidos	Ingeniería y Tecnología	ICMI	2021
INGE1428	Termofluidos	Ingeniería y Tecnología	ICMI	2021
FITA0069	Termofluidos	Ingeniería y Tecnología	ICMI	2021
ICIAD002	Termofluidos	Ingeniería y Tecnología	ICIA	2022
FITA0069	Termofluidos	Ingeniería y Tecnología	ICMI	2022
ICMIJ004	Proyecto de título	Ingeniería y Tecnología	ICMI	2022
CMIJ004	Proyecto de título	Ingeniería y Tecnología	ICMI	2022
ICMI1041	Recursos hídricos para la minería	Ingeniería y Tecnología	ICMI	2022

ICMIF005	Fisicoquímica	Ingeniería y Tecnología	ICMI	2022
FITA0069	Termofluidos	Ingeniería y Tecnología	ICMI	2022
ICIAD002	Termofluidos	Ingeniería y Tecnología	ACIA	2022
FITA0069	Termofluidos	Ingeniería y Tecnología	ICMI	2022
FITA0066	Mecánica	Ingeniería y Tecnología	ICMI	2022
INGE1428	Termofluidos	Ingeniería y Tecnología	ICMI	2022
ICMIE003	Termodinámica para la minería	Ingeniería y Tecnología	ICMI	2022
ICMIE001	Ciencia y resistencia de los materiales	Ingeniería y Tecnología	ICMI	2022
ICMIE003	Termodinámica para la minería	Ingeniería y Tecnología	ICMI	2022
INGE1428	Termofluidos	Ingeniería y Tecnología	ICMI	2022
INGE1428	Termofluidos	Ingeniería y Tecnología	ICMI	2022
FITA0069	Termofluidos	Ingeniería y Tecnología	ICMI	2022
FITA0070	Electricidad y magnetismo	Ingeniería y Tecnología	ICMI	2022

FITA0069	Termofluidos	Ingeniería y Tecnología	ICMI	2022
FITA0069	Termofluidos	Ingeniería y Tecnología	ICMI	2022
FITA0066	Mecánica	Ingeniería y Tecnología	ICMI	2022
CMIJ004	Proyecto de título	Ingeniería y Tecnología	ICMI	2023
QUI1033	Química general	Ingeniería y Tecnología	ICMI	2023
DQUI1033	Química general	Ingeniería y Tecnología	ICMI	2023
FITA0069	Termofluidos	Ingeniería y Tecnología	ICMI	2023
ICMIF005	Fisicoquímica	Ingeniería y Tecnología	ICMI	2023
ICMIE001	Ciencia y resistencia de los materiales	Ingeniería y Tecnología	ICMI	2023
FITA0069	Termofluidos	Ingeniería y Tecnología	ICMI	2023
FITA0069	Termofluidos	Ingeniería y Tecnología	ICMI	2023
ICMIE003	Termodinámica para la minería	Ingeniería y Tecnología	ICMI	2023
ICMIJ004	Proyecto de título	Ingeniería y Tecnología	ICMI	2023

FITA0069	Termofluidos	Ingeniería y Tecnología	ICMI	2023
ICIAD002	Termofluidos	Ingeniería y Tecnología	ICIA	2023
ICIAD002	Termofluidos	Ingeniería y Tecnología	ICIA	2023
FITA0069	Termofluidos	Ingeniería y Tecnología	ICMI	2023
ICMIE003	Termodinámica para la minería	Ingeniería y Tecnología	ICMI	2023
ICMIJ004	Proyecto de título	Ingeniería y Tecnología	ICMI	2023
FITA0069	Termofluidos	Ingeniería y Tecnología	ICMI	2023
FITA0069	Termofluidos	Ingeniería y Tecnología	ICMI	2024
ICIAD002	Termofluidos	Ingeniería y Tecnología	ICMI	2024
ICMIJ004	Proyecto de título	Ingeniería y Tecnología	ICMI	2024
FITA0069	Termofluidos	Ingeniería y Tecnología	ICMI	2024
ICMIE001	Ciencia y resistencia de los materiales	Ingeniería y Tecnología	ICMI	2024
ICMIE003	Termodinámica para la minería	Ingeniería y Tecnología	ICMI	2024

ICMIG005	Ingles de especialidad	Ingeniería y Tecnología	ICMI	2024
FITA0069	Termofluidos	Ingeniería y Tecnología	ICMI	2024
ICMIF005	Fisicoquímica	Ingeniería y Tecnología	ICMI	2024
ICMIJ004	Proyecto de título	Ingeniería y Tecnología	ICMI	2024
NRC: 5554	Fenómenos de transporte	Ingeniería y Tecnología	ICMI	2025
NRC: 1590	Termofluidos	Ingeniería y Tecnología	ICMI	2025
NRC: 4733	Ciencia y resistencia de materiales	Ingeniería y Tecnología	ICMI	2025
NRC: 4735	Termodinámica para la minería	Ingeniería y Tecnología	ICMI	2025
NRC: 6039	Ingles de especialidad	Ingeniería y Tecnología	ICMI	2025
NRC: 6039	Ingles de especialidad	Ingeniería y Tecnología	ICMI	2025
NRC: 5549	Termofluidos	Ingeniería y Tecnología	ICMI	2025