

DEMETRIO MILEA
CURRICULUM VITAE ET STUDIORUM

PERSONAL INFORMATION

First and family name: Demetrio M. MILEA
Date of birth: 12/Feb/1976
Place of birth: Reggio Calabria, ITALY
Marital status: [REDACTED]
Nationality: Italian
Personal address and country: [REDACTED]
Personal mobile phone: [REDACTED]
Personal email: [REDACTED]

PROFESSIONAL INFORMATION

Current Position: Associate Professor
Italian SSD (Sector): CHIM/01 – Chimica Analitica (Analytical Chemistry)
Starting date: 26/Oct/2015
Institution: Università degli Studi di Messina
Department: Dipartimento di Scienze Chimiche,
 Biologiche, Farmaceutiche ed Ambientali – CHIBIOFARAM
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Researcher ID: H-7785-2012
ResearchGate: https://www.researchgate.net/profile/Demetrio_Milea
Publons <https://publons.com/researcher/1624297/demetrio-milea/>
Specialty UNESCO codes: 2301, 2210, 2213
Keywords: Chemical Speciation, Chemical Thermodynamics, Natural
 Fluids, Chemical Equilibria, Solution Chemistry, Real Systems,
 Modelling
JCR Articles: 66 + 2 international book chapters
H-index: 25
Total Citations: ~ 1400 **Average Citations per item:** > 20
Total Impact Factor (JCR): 274.561 **Average IF per item (JCR):** 4.160
5 Years Impact Factor (JCR): 259.833 **Average 5YIF per item (JCR):** 3.997

LANGUAGE SKILLS

Italian: Mother tongue
English: Highly proficient
French: Good
Spanish: Intermediate

EDUCATION

- 2000 – 2003 University of Messina
Department of Inorganic, Analytical and Physical Chemistry
PhD in Chemistry, sector: **Analytical and Environmental Chemistry**
Date of award: 06/Feb/2004. Mark at entrance examination: 114/120 (first classified)
Title of PhD thesis: Hydrolysis and binding ability of heavy metals and organotin(IV) compounds in multielectrolyte solutions.
Supervisor: Prof. Claudia Foti
- 1994 – 2000 University of Messina
Department of Inorganic, Analytical and Physical Chemistry
Degree in Chemistry (M.Sc.), sector: **Applied and Food Chemistry**
Date of award: 27/Jul/2000. Mark: 108/110
Title of experimental thesis: Speciation of alkyltin(IV) cations in natural fluids with organic and inorganic ligands at different ionic strengths.
Supervisor: Prof. Silvio Sammartano

OTHER PROFESSIONAL QUALIFICATIONS

- 12/Apr/2017 **Qualified as Full Professor** of Analytical Chemistry according to Italian ASN (Abilitazione Scientifica Nazionale, National Scientific Qualification, art. 16 of the law 240/2010), year 2016, session 1, Academic Recruitment Field 03/A1 – Analytical Chemistry, Academic Discipline CHIM/01 – Analytical Chemistry.
- From 29/Dec/2008 to 25/Oct/2015 Full Researcher / Assistant Professor of Analytical Chemistry at the Dept. of Chemical Sciences (former Inorganic, Analytical and Physical Chemistry) of the University of Messina.
- From 21/May/2007 to 28/Dec/2008 Post-doc fellow in Chemistry (Analytical Chemistry) at the Dept. of Chemical Sciences (former Inorganic, Analytical and Physical Chemistry) of the University of Messina.
- From 03/Nov/2003 to 17/May/2007 Holder of a four-year Research Grant at BIO.M.A.A. Dept. (Dipartimento di BIOTecnologie per il Monitoraggio Agroalimentare ed Ambientale) of the "Mediterranea" University of Reggio Calabria.
Appointed Cultore della Materia (Expert of the subject) for the Analytical Chemistry and Inorganic Chemistry disciplines by the Faculty of Agronomy of the "Mediterranean" University of Reggio Calabria.
Professional Qualification of Chemist, according to the Italian law, in Nov/2000.

RESEARCH AND TEACHING ACTIVITY ABROAD

- From 04/Jun/2021 to 21/Jun/2021 Short Term Scientific Mission (STSM) Grantee in the Department of Analytical Chemistry of the Faculty of Chemistry of the University of Białystok (Poland), in the frame of the COST Action CA18202 – NECTAR – Network for Equilibria and Chemical Thermodynamics Advanced Research.

- From 08/Apr/2019 to 09/May/2019 Visiting Researcher in the Laboratoire de Reconnaissance et Procédés de Séparation Moléculaire (RePSeM) of the Analytical Sciences Department of Institut Pluridisciplinaire Hubert Curien (IPHC, CNRS, UMR7178) of the University of Strasbourg (France), in the frame of the ARCADIA (smART materials for landfillleaChAte remeDIAtion) Project.
- From 05/Mar/2018 to 09/Mar/2018 Teacher of the PhD course in Chemistry of the Friedrich-Schiller-Universität Jena (Jena, Germany), within the Erasmus+ Programme "STAFF MOBILITY FOR TEACHING", A.Y. 2017/2018.
- From 18/Oct/2017 to 23/Oct/2017 Teacher of the PhD course in "Environmental Pollution and Toxicology" of the University of the Basque Country (Bilbao, Spain), within the Erasmus+ Programme "STAFF MOBILITY FOR TEACHING", A.Y. 2016/2017.
- From 06/Mar/2017 to 10/Mar/2017 Teacher of the PhD course in "Environmental Pollution and Toxicology" of the University of the Basque Country (Bilbao, Spain), within the Erasmus+ Programme "STAFF MOBILITY FOR TEACHING", A.Y. 2016/2017.
- From 07/Mar/2016 to 11/Mar/2016 Teacher of the PhD course in "Environmental Pollution and Toxicology" of the University of the Basque Country (Bilbao, Spain), within the Erasmus+ Programme "STAFF MOBILITY FOR TEACHING", A.Y. 2015/2016.
- From 01/Sep/2002 to 30/Nov/2002 Visiting PhD student and teaching assistant of Prof. Frank J. Millero (Prof. of Marine and Physical Chemistry and Associate Dean) at the Rosenstiel School of Marine and Atmospheric Science (RSMAS) of the University of Miami.

SCHOOLS AND COURSES

- From 03/Mar/2004 to 05/Mar/2004 "II scuola italiana sui descrittori molecolari e I scuola DRAGON" (Second Italian School on Molecular Descriptors and First DRAGON School), Milano (Italy)
- 07/Jan/2004 "Valutazione dei rischi e buona prassi di laboratorio chimico in accordo con il D.Lgs. n. 626/94" (Risk Assessment and Standard Procedures in the Chemistry Laboratories, according to the Italian 626/94 Decree), Messina (Italy)
- From 03/Fe/2003 to 06/Feb/2003 "Scuola PARVUS" (PARVUS School), Genova (Italy)
- From 09/Sep/2000 to 16/Sep/2000 3rd Edition of International School on Marine Chemistry", Ustica (PA, Italy)

BOARDS AND COMMITTEES

- Rector Delegate to Horizon Projects for the University of Messina
- Action Chair and Grant Holder Scientific Representative of COST Action CA18202 – NECTAR – Network for Equilibria and Chemical Thermodynamics Advanced Research
- President of the International Group of Thermodynamics of Complexes (ISMEC Group)
- Associate Editor of Reviews in Analytical Chemistry (De Gruyter, ISI Journal).
- Member of the Editorial Board of Journal of Analytical Methods in Chemistry (Hindawi, ISI Journal).
- Member of the Editorial Board of Bioinorganic Chemistry and Applications (Hindawi, ISI Journal).

- Member of the Editorial Board of Current Analytical Chemistry (Bentham, ISI Journal).
- Member of the Editorial Board of Current Physical Chemistry (Bentham).
- Former member of the Professional Board of Chemists of Calabria.
- Member, since A.Y. 2008/2009, of the Scientific and Teaching Board of the PhD Course in Chemical Sciences of the University of Messina.
- Chair of the Scientific Committee of the 2nd European NECTAR Conference held in Lisbon (Portugal) from 25th to 27th Aug 2021.
- Chair of the Scientific Committee of the XXXI International Symposium on Thermodynamics of Metal Complexes, ISMEC 2021, held in Białystok (Poland) from 16th to 18th Jun 2021.
- Chair of the Scientific Committee of the 1st European NECTAR Conference held in Belgrade (Serbia) from 05th to 06th Mar 2020.
- Member of the Organizing Committee of the XXVI Congresso della Divisione di Chimica Analitica della Società Chimica Italiana, held in Giardini Naxos from 18th to 22nd Sep 2016.
- Member of the Organizing Committee of the XXII International Symposium on Metal Complexes (ISMEC2011), held in Giardini Naxos from 13th to 16th Jun 2011.
- Member of the Organizing Committee of the "Mediterranean Conference on Chemistry of Aquatic Systems" (AQUACHEM04), held in Reggio Calabria from 04th to 08th Sep 2004.

CONGRESSES AND INVITED LECTURES

- Participation to several national and international congresses and meetings.
- Invited lecturer by the PhD School on Chemical and Material Science of the University of Pisa (Italy) from 12th to 14th Dec. 2018, for three lectures on "Application of Speciation Analysis to Real Systems: from Theory to Practice".
- Invited lecturer by local CRC ChemBioSys research teams at the Friedrich-Schiller-Universität Jena (Germany) from 29th Jan 2017 to 05th Feb 2017, for a lecture on "Chemical Speciation in Biological Systems" and for scientific discussions on ongoing projects.
- Invited lecturer by Procter & Gamble Co. at P&G's Mason Business Center, 1 P&G Plaza, Cincinnati, OH, USA from 10th to 15th Apr 2016, for three lectures on "Application of Speciation Analysis to Real Systems: from Theory to Practice".
- Invited lecturer (keynote lecture) at the XVIII Italian-Spanish Congress on Thermodynamics of Metal Complexes (ISMEC 2007) held in S. Margherita di Pula (CA, Italy), from 05th to 09th Jun 2007. Title of presentation: F. Crea, C. De Stefano, D. Milea, S. Sammartano, Phytate acid-base properties in simple and mixed aqueous ionic media, K8, 2007.

FINANCED RESEARCH PROJECTS AND GRANTS

- COST Action CA18202 – NECTAR, Network for Equilibria and Chemical Thermodynamics Advanced Research, Action Chair and Grant Holder Scientific Representative.
- Research & Mobility 2017, University of Messina: ARCADIA - smARt materials for landfill leaChAte remediation. Role: Component of Research Unit.
- MIUR-DAAD Joint Mobility Program 2nd ed. (2017) - Metal uptake by *Azotobacter vinelandii* metallophores: a thermodynamic approach. Duration: 24 months. Role: Principal Investigator
- PRIN 2015 (Prot. n.2015MP34H3_003) - Multiple equilibria in natural and biological fluids: from speciation to selective sequestering. Proposer: Italian Ministry of University and Research (MIUR). Duration: 24 months. Role: Component of Research Unit.

- PRA UNIME 2008/2009 (cod. ORME09FAAZ) - Studio Quantitativo del Potere Sequestrante di Differenti Classi di Leganti O-, N- e S- Donatori nei Confronti di Cationi Inorganici (o Organometallici) ed Organici di Interesse Ambientale e Biologico. Proposer: University of Messina. Duration: 24 months. Role: Component of Research Unit.
- PRA UNIME 2006/2007 (cod. ORME07J57N) - Studi sulla Sequestrazione di Cationi Inorganici ed Organici mediante Leganti a Basso ed Alto Peso Molecolare. Proposer: University of Messina. Duration: 24 months. Role: Component of Research Unit.
- PRA UNIME 2003 (cod. ORME038950) - Parametri Termodinamici per la Formazione di Complessi di Metalli e Composti Organometallici Potenzialmente Tossici con Leganti a Basso e Medio Peso Molecolare. Proposer: University of Messina. Duration: 12 months. Role: Component of Research Unit.
- PRA UNIME 2002 (cod. ORME027390) - Parametri Termodinamici per la Formazione di Complessi di Metalli e Composti Organometallici Potenzialmente Tossici con Leganti a Basso Peso Molecolare. Proposer: University of Messina. Duration: 12 months. Role: Component of Research Unit.
- FIRB 2001 RBAU01HLFX_004 - Speciazione, Caratterizzazione e Proprietà Fotochimiche della Sostanza Organica ed Inorganica Presente nell'Acqua di Mare. Proposer: Italian Ministry of University and Scientific and Technological Research (MURST). Duration: 36 months. Role: Component of Research Unit.

RESPONSIBILITY IN RESEARCH PROJECTS

- Action Chair and Grant Holder Scientific Representative of COST Action CA18202 – NECTAR – Network for Equilibria and Chemical Thermodynamics Advanced Research
- Main Proposer of COST Action OC-2018-2-23144 – NECTAR, Network for Equilibria and Chemical Thermodynamics Advanced Research, with 52 proposers from 18 countries (call OC-2018-2, mark 49/50, approved: renamed CA18202).
- Main Proposer of COST Action OC-2017-1-22012 – NECTAR, Network for Equilibria and Chemical Thermodynamics Advanced Research, with 41 proposers from 15 countries (call OC-2017-1, final evaluation 42, threshold 45).
- Principal Investigator for Italy of the project: " Metal uptake by *Azotobacter vinelandii* metallophores: a thermodynamic approach ", submitted with Prof. Winfried Plass (Full Prof. of Inorganic Chemistry) of the Friedrich-Schiller-Universität Jena (Germany) to the MIUR-DAAD Joint Mobility Program (PPP Italien) 2nd ed., 2017, financed.
- Principal Investigator, together with Prof. Luis Angel Fernandez Quadrado (Full Prof. of Analytical Chemistry) of the University of the Basque Country, Bilbao (Spain), in a project aimed at the experimental determination of thermodynamic parameters for the definition of the speciation of estuarine waters, as well as the development theoretical approaches, new systems and calculation strategies for the determination of the Total Alkalinity and pH in non-conventional conditions (Estuarine waters) by means of advanced models.
- Principal Investigator for Italy of the project: "Thermodynamic study of Cyclodextrin inclusion complexes of metal containing molecules of biological/pharmacological relevance", submitted with Prof. Winfried Plass (Full Prof. of Inorganic Chemistry) of the Friedrich-Schiller-Universität Jena (Germany) to the MIUR-DAAD Joint Mobility Program (PPP Italien) 2015.
- Responsible of Research Unit for the project "Caratterizzazione chimica di fluidi biologici non convenzionali per il monitoraggio delle diete", in collaboration with Dr. Tarita Biver (Università di

Pisa, Italy) and with Dr. Laura Sabatino (CNR, Istituto di Fisiologia Clinica, Pisa, Italy), submitted within the PRIN 2012 call by Italian Ministry of University and Research, Prot. n. 20128XB4T4_002.

- Fellow in Research Project "Modeling of the network of interactions of heavy metals, organometals and radionuclides in natural fluids", in collaboration with Prof. Manuel Sastre de Vicente of the Universidad de A Coruña (Spain), submitted within the Marie Curie Intra European Fellowship (Call identifier: FP6-2005-Mobility-5), proposal N° 039117 - MODINATURFLU.

CONSULTANCIES AND COLLABORATIONS (ONLY THOSE DOCUMENTED)

- Collaboration with Research Groups outside the University of Messina, resulting in articles/proceedings:

- 1) Prof. Alberto Pettignano's Group (University of Palermo, Italy).
- 2) Prof. Carmelo Rigano (University of Catania, Italy).
- 3) Prof. Frank J. Millero's Group (Rosenstiel School of Marine and Atmospheric Science, RSMAS, University of Miami, USA).
- 4) Dr. Peter Gans (University of Leeds, UK / Protonic Software Ltd).
- 5) Dr. Veronica Fracassetti and Dr. Marco Marchesi (Bozzetto Giovanni S.p.A., Filago, BG, Italy).
- 6) Prof. Winfried Plass's Group (Friedrich-Schiller-Universität Jena, Germany).
- 7) Prof. Luis Ángel Fernández's Group (University of the Basque Country, Bilbao, Spain).
- 8) Dr. Giuseppe Brancato (Scuola Normale Superiore, Pisa, Italy).
- 9) Dr. Sofia Gama's Group (University of Białystok, Poland).
- 10) Dr. Michel Meyer (Université de Bourgogne Franche-Comté, France).

- Consultant, since 2008, of a multinational corporation (Procter & Gamble, Ltd) in the research area of chemical speciation, for the modeling, design, development and qualification of chemically complex consumer products.

- Collaboration with Giovanni Bozzetto S.p.A. (textile, performance and building chemicals, via Monte Grappa 7, 24121 Bergamo, Italy) for the synthesis, purification, characterization and determination of the sequestering ability of polyphosphonic ligands.

TEACHING AND TUTORING ACTIVITY

- Lecturer (AYs 2015/2016 – 2021/2022) of "Forensic Analytical Chemistry" (6 ECTs) for the MSc Course in Chemistry of the University of Messina (Italy).

- Lecturer (AYs 2020/2021 – 2021/2022) of "Chemical Oceanography" (6 ECTs) for the MSc Course in Biology and Ecology of Marine and Coastal Environment of the University of Messina (Italy).

- Lecturer (AY 2021/2022) of "Chemistry of Aquatic Systems" (6 ECTs) for the BSc Course in Biological Sciences of the University of Messina (Italy).

- Lecturer (AYs 2016/2017 – 2019/2020) of "Chemical Oceanography" (5 ECTs) for the BSc Course in Biological Sciences of the University of Messina (Italy).

- Lecturer (AY 2017/2018) of "Techniques of Chemical Analyses Applied to Forensic Sciences" (2 ECTs) for the 2nd level Master in "Criminology and Forensic Sciences" of the University of Messina (Italy).

- Lecturer (AYs 2017/2018 – 2018/2019) of "Elements of Analytical Chemistry" (4 ECTs) for the BSc Course in Biological Sciences of the University of Messina (Italy).

- Lecturer (AY: 2014/2015) of "Analytical Chemistry and Laboratory, II part" (4 ECTs) for the BSc Course in Chemistry of the University of Messina (Italy).

- Lecturer (AY 2014/2015) of “Chemistry of Polluted Soils with Laboratory” 1st level Master in “Forensic Geology” of the University of Messina (Italy).
- Lecturer (AY 2013/2014) of "Didactics of Analytical Chemistry" and “Laboratory of Didactics of Analytical Chemistry) for the special qualifying path (Percorso Abilitante Speciale, PAS) for experienced high school teachers in Chemistry and Chemical Technologies (Italian class A013) and Laboratory of Chemistry and Industrial Chemistry (Italian class C240) of the University of Messina (Italy).
- Lecturer (AYs 2012/2013 – 2015/2016) of “Chemometrics” (4 ECTs) for the BSc and MSc Courses in Chemistry of the University of Messina (Italy).
- Lecturer (AY 2012/2013) of "Didactics of Analytical Chemistry" for the teaching traineeship for high school teachers (Tirocinio Formativo Attivo, TFA) in Chemistry and Chemical Technologies (Italian class “A013”) of the University of Messina (Italy).
- Lecturer and Tutor (AY 2010/2011) of “Marine Chemistry” (in English) and “Sampling and Analysis of Waters” for the 2nd level Master in “Environmental Risk: Origin, Analysis and Monitoring” of the University of Messina (Italy).
- Lecturer (AYs 2009/2010 – 2012/2013) of “Elements of Physical Chemistry” (4 ECTs) for the MSc Course in Pharmaceutical Chemistry and Technology of the University of Messina (Italy).
- Assistant and co-Lecturer (AYs 2008/2009 – 2012/2013) of “Analytical Chemistry” (8 ECTs) for the MSc Courses in Pharmaceutical Chemistry and Technology and Pharmacy of the University of Messina and of the “Instrumental Analytical Chemistry” (6 ECTs) for the BSc Course in Pharmaceutical Sciences Applied to Health Products of the University of Messina (Italy).
- Lecturer (AYs 2004/05 – 2006/07) of “Instrumental Chemical Analysis” (3 University Credits, ECTs) for the MSc Course in Food Science and Technologies of the "Mediterranea" University of Reggio Calabria (Italy).
- Tutor /Supervisor of several BSc and MSc students, and of 1 PhD student of the PhD Course in Chemistry of the University of Messina (29th cycle).

RESEARCH AND REVIEWING ACTIVITY

Research of Dr. Milea is mainly focused (but not limited) to the determination of formation thermodynamic parameters in multicomponent aqueous solutions. Particular attention is paid to the evaluation and modeling of the speciation of ligands and cations of biological, technological, and environmental interest in different conditions. His research covers mainly the following topics:

- Speciation analysis of multicomponent aqueous solutions;
- Chemical thermodynamics;
- Coordination chemistry;
- Metal and ligand interactions with the main components of natural waters and biological fluids;
- Determination of thermodynamic parameters (e.g., stability constants, activity coefficients, enthalpy changes, solubility products, etc.);
- Dependence of speciation and thermodynamic parameters on system conditions (e.g., ionic strength, ionic medium, pH, temperature, mixtures, etc.);
- Sequestration/remediation studies;
- Aquatic Geochemistry;
- Speciation and interaction models for real systems of biological, environmental and technological/industrial interest;
- Chemometrics;

- Computer programs for speciation analysis and determination of thermodynamic parameters;
- Chemical modeling.


Research of Dr. Milea is performed mainly (but not exclusively) by:

- Electrochemical techniques (Potentiometry, Voltammetry, Coulometry)
- Calorimetric techniques (Titration calorimetry);
- Thermal Analysis;
- Spectroscopic techniques (UV/VIS, Fluorescence, Atomic Spectroscopy).
- Computer programs

At present time, he is coauthor of 65 articles on ISI journals and 2 book chapters, and he presented his results in many national and international conferences. His research is performed in collaboration with several national and international research groups and he is also reviewer of almost one hundred of scientific contributions sent to peer reviewed ISI Journals (e.g., Chemical Physics; Environmental Pollution; European Journal of Inorganic Chemistry; Food Analytical Methods; Journal of Pharmaceutical and Biomedical Analysis; Journal of Thermal Analysis and Calorimetry; Journal of Chemical and Engineering Data; Journal of Saudi Chemical Society; Journal of Separation Science; Marine Chemistry; Marine Pollution Bulletin; Phosphorus, Sulfur, and Silicon and the Related Elements; Science of the Total Environment; Sensor Letters; Trends in Environmental Analytical Chemistry), as well as the VQR 2004-2010 e VQR 2011-2014 campaigns of the Italian Ministry of University and Research for the Evaluation of the Quality of Research. He is also member of the Editorial Board of the ISI journals Bioinorganic Chemistry and Applications, Journal of Analytical Methods in Chemistry, Current Analytical Chemistry and Reviews in Analytical Chemistry, and of Current Physical Chemistry.

Messina, September 06th, 2021

Yours faithfully



DEMETRIO MILEA
LIST OF PUBLICATIONS

(only ISI journals and book chapters, excluding congress proceedings)

- [1] C. Foti, A. Gianguzza, D. Milea and S. Sammartano: Hydrolysis and chemical speciation of $(C_2H_5)_2Sn^{2+}$, $(C_2H_5)_3Sn^+$, $(C_3H_7)_3Sn^+$ in aqueous media simulating the major composition of natural waters, *Appl. Organomet. Chem.* 2002, 16, 34-43.
- [2] C. De Stefano, D. Milea and S. Sammartano: Speciation of phytate ion in aqueous solution. Protonation constants in tetraethylammonium iodide and sodium chloride, *J. Chem. Eng. Data* 2003, 48(1), 114-119.
- [3] C. De Stefano, D. Milea, A. Pettignano and S. Sammartano: Speciation of phytate ion in aqueous solution. Alkali metal complex formation in different ionic media, *Anal. Bioanal. Chem.* 2003, 376(7), 1030-1040.
- [4] C. De Stefano, O. Giuffrè, D. Milea, C. Rigano and S. Sammartano: Speciation of phytate ion in aqueous solution. Non covalent interactions with biogenic polyamines, *Chem. Spec. Bioavail.* 2003, 15(2), 29-36.
- [5] A. Gianguzza, D. Milea, F.J. Millero and S. Sammartano: Hydrolysis and chemical speciation of dioxouranium(VI) ion in aqueous media simulating the major ion composition of seawater, *Mar. Chem.* 2004, 85, 103-124.
- [6] C. Foti, A. Gianguzza, D. Milea, F.J. Millero and S. Sammartano: Speciation of trialkyltin(IV) cations in natural fluids, *Mar. Chem.* 2004, 85, 157-167.
- [7] C. De Stefano, D. Milea and S. Sammartano: Speciation of phytate ion in aqueous solution. Thermodynamic parameters for its protonation in NaCl, *Thermochim. Acta* 2004, 423, 63-69.
- [8] F. Crea, D. Milea and S. Sammartano: Enhancement of hydrolysis through the formation of mixed hetero-metal species, *Talanta* 2005, 65, 229-238.
- [9] C. De Stefano, D. Milea and S. Sammartano: Speciation of phytate ion in aqueous solution. Dimethyltin(IV) interactions in $NaCl_{aq}$ at different ionic strengths, *Biophys. Chem.* 2005, 116, 111-120.
- [10] A. De Robertis, C. De Stefano, D. Milea and S. Sammartano: Additivity Factors in the Binding of Diethyltin(IV) Cation by Ligands Containing Amino- and Carboxylic Groups at Different Ionic Strengths, *J. Solution Chem.* 2005, 34(10), 1211-1226.
- [11] F. Crea, D. Milea and S. Sammartano: Enhancement of hydrolysis through the formation of mixed hetero-metal species: dioxouranium(VI) – cadmium(II) mixtures, *Ann. Chim. (Rome)* 2005, 95(11-12), 767-778.
- [12] C. De Stefano, D. Milea, N. Porcino and S. Sammartano: Speciation of phytate ion in aqueous solution. Sequestering ability towards mercury cation in $NaCl_{aq}$ at different ionic strengths, *J. Agric. Food Chem.* 2006, 54(4), 1459-1466.
- [13] C. De Stefano, A. Gianguzza, D. Milea, A. Pettignano and S. Sammartano: Sequestering ability of polyaminopolycarboxylic ligands towards dioxouranium(VI) cation, *J. Alloys Compd.* 2006, 424(1-2), 93-104.
- [14] C. De Stefano, D. Milea, A. Pettignano and S. Sammartano: Modeling ATP protonation and activity coefficients in $NaCl_{aq}$ and KCl_{aq} by SIT and Pitzer equations, *Biophys. Chem.* 2006, 121, 121-130.

- [15] C. De Stefano, D. Milea, N. Porcino and S. Sammartano: Speciation of phytate ion in aqueous solution. Cadmium(II) interactions in NaCl_{aq} at different ionic strengths, *Anal. Bioanal. Chem.* 2006, 386(2), 346-356.
- [16] F. Crea, C. De Stefano, D. Milea and S. Sammartano: Dioxouranium(VI)-carboxylate complexes. Speciation of UO_2^{2+} -1,2,3-Propanetricarboxylate system in NaCl_{aq} at different ionic strengths and at $t = 25^\circ\text{C}$, *Ann. Chim. (Rome)* 2007, 97(3-4), 163-175.
- [17] C. Bretti, A. Giacalone, A. Gianguzza, D. Milea and S. Sammartano: Modeling S-carboxymethyl-L-cysteine protonation and activity coefficients in sodium and tetramethylammonium chloride aqueous solutions by SIT and Pitzer equations, *Fluid Phase Equilib.* 2007, 252, 119-129.
- [18] F. Crea, P. Crea, D. Milea, N. Porcino and S. Sammartano: Speciation of phytate ion in aqueous solution. Trimethyltin(IV) interactions in self medium, *Ann. Chim. (Rome)* 2007, 97, 635-645.
- [19] P. Crea, A. De Robertis, C. De Stefano, D. Milea and S. Sammartano: Modeling the dependence on medium and ionic strength of glutathione acid-base behavior in LiCl_{aq} , NaCl_{aq} , KCl_{aq} , RbCl_{aq} , CsCl_{aq} , $(\text{CH}_3)_4\text{NCl}_{\text{aq}}$ and $(\text{C}_2\text{H}_5)_4\text{NI}_{\text{aq}}$, *J. Chem. Eng. Data* 2007, 52(3), 1028-1036.
- [20] P. Crea, C. De Stefano, D. Milea, N. Porcino and S. Sammartano: Speciation of phytate ion in aqueous solution. Protonation constants and copper(II) interactions in $\text{NaNO}_3_{\text{aq}}$ at different ionic strengths, *Biophys. Chem.* 2007, 128, 176-184.
- [21] F. Crea, P. Crea, C. De Stefano, D. Milea and S. Sammartano: Speciation of phytate ion in aqueous solution. Protonation in CsCl_{aq} at different ionic strengths and mixing effects in $\text{LiCl}_{\text{aq}} + \text{CsCl}_{\text{aq}}$, *J. Mol. Liq.* 2008, 138, 76-83.
- [22] F. Crea, C. De Stefano, D. Milea and S. Sammartano: Formation and stability of phytate complexes in solution, *Coord. Chem. Rev.* 2008, 252, 1108-1120.
- [23] P. Crea, C. De Stefano, D. Milea and S. Sammartano: Formation and stability of mixed $\text{Mg}^{2+} / \text{Ca}^{2+} /$ phytate species in seawater media. Consequences on ligand speciation, *Mar. Chem.* 2008, 112(3-4), 142-148.
- [24] F. Crea, C. De Stefano, D. Milea and S. Sammartano: Speciation of phytate ion in aqueous solution. Thermodynamic parameters for zinc(II) sequestration at different ionic strengths and temperatures, *J. Solution Chem.* 2009, 38(1), 115-134.
- [25] A. Casale, C. De Stefano, G. Manfredi, D. Milea and S. Sammartano: Sequestration of alkyltin(IV) compounds in aqueous solution: formation, stability and empirical relationships for the binding of dimethyltin(IV) cation by N- and O- donor ligands, *Bioinorg. Chem. Appl.* 2009, 2009, Article ID 219818, 17 pages. DOI:10.1155/2009/219818.
- [26] C. De Stefano, G. Lando, D. Milea, A. Pettignano and S. Sammartano: Formation and stability of cadmium(II) / phytate complexes by different electrochemical techniques. Critical analysis of results, *J. Solution Chem.* 2010, 39(2), 179-195.
- [27] F. Crea, C. De Stefano, D. Milea and S. Sammartano: Thermodynamic data for lanthanoid(III) sequestration by phytate at different temperatures, *Monatsh. Chem.* 2010, 141(5), 511-520.
- [28] A. Gianguzza, D. Milea, A. Pettignano and S. Sammartano: Palladium(II) sequestration by phytate in aqueous solution – speciation analysis and ionic medium effects, *Environ. Chem.* 2010, 7, 259-267.

- [29] R.M. Cigala, F. Crea, G. Lando, D. Milea and S. Sammartano: Solubility and acid-base properties of concentrated phytate in self-medium and in NaCl_{aq} at $T = 298.15$ K, *J. Chem. Thermodyn.* 2010, 42(11), 1393-1399.
- [30] R.M. Cigala, F. Crea, C. De Stefano, G. Lando, D. Milea and S. Sammartano: Quantitative Electrochemical Study for the Sequestration of Cu²⁺, Pb²⁺, Zn²⁺ and Ni²⁺ by Phytate: Comparison of Different Techniques, *J. Chem. Eng. Data* 2010, 55(11), 4757-4767.
- [31] R.M. Cigala, F. Crea, C. De Stefano, G. Lando, D. Milea and S. Sammartano: Thermodynamics of binary and ternary interactions in the tin(II)/phytate system in aqueous solutions, in the presence of Cl⁻ or F⁻, *J. Chem. Thermodyn.* 2012, 51, 88-96.
- [32] R.M. Cigala, F. Crea, C. De Stefano, G. Lando, D. Milea and S. Sammartano: The Inorganic Speciation of Tin(II) in Aqueous Solution, *Geochim. Cosmochim. Acta* 2012, 87, 1-20.
- [33] R.M. Cigala, F. Crea, C. De Stefano, G. Lando, D. Milea and S. Sammartano: Modeling the acid–base properties of glutathione in different ionic media, with particular reference to natural waters and biological fluids, *Amino Acids* 2012, 43, 629-648.
- [34] C. Bretti, R.M. Cigala, G. Lando, D. Milea and S. Sammartano: Sequestering Ability of Phytate toward Biologically and Environmentally Relevant Trivalent Metal Cations, *J. Agric. Food Chem.* 2012, 60, 8075-8082.
- [35] F. Crea, D. Cucinotta, C. De Stefano, D. Milea, S. Sammartano, and G. Vianelli: Modeling solubility, acid–base properties and activity coefficients of amoxicillin, ampicillin and (+)6-aminopenicillanic acid, in NaCl_(aq) at different ionic strengths and temperatures, *Eur. J. Pharm. Sci.* 2012, 47, 661-677.
- [36] R.M. Cigala, F. Crea, C. De Stefano, D. Milea, S. Sammartano and M. Scopelliti: Speciation of tin(II) in aqueous solution: thermodynamic and spectroscopic study of simple and mixed hydroxocarboxylate complexes, *Monatsh. Chem.* 2013, 144, 761-772.
- [37] F. Crea, C. Foti, D. Milea, and S. Sammartano: Speciation of Cadmium in the Environment, in: "Cadmium: From Toxicity to Essentiality", *Met. Ions Life Sci.*, Vol. 11, Sigel, A.; Sigel, H.; Sigel, R.K.O.; Eds.; Springer Science + Business Media B.V., Dordrecht, 2013, pp 63-83.
- [38] C. Bretti, R.M. Cigala, G. Lando, D. Milea, and S. Sammartano: Some Thermodynamic Properties of Aqueous 2-Mercaptopyridine-N-Oxide (Pyrithione) Solutions, *J. Solution Chem.* 2014, 43, 1093-1109.
- [39] R.M. Cigala, M. Cordaro, F. Crea, C. De Stefano, V. Fracassetti, M. Marchesi, D. Milea, and S. Sammartano: Acid–base properties and alkali and alkaline earth metal complex formation in aqueous solution of Diethylenetriamine-N,N,N',N'',N''-Pentakis-(Methylenephosphonic) Acid obtained by an efficient synthetic procedure, *Ind. Chem. Eng. Res.*, 2014, 53, 9544-9553.
- [40] F. Crea, C. De Stefano, C. Foti, D. Milea, and S. Sammartano: Chelating Agents for the Sequestration of Inorganic and Monomethyl Mercury(II), *Curr. Med. Chem.* 2014, 21, 3819-3836.
- [41] D. Cucinotta, C. De Stefano, O. Giuffrè, G. Lando, D. Milea, and S. Sammartano: Formation, stability and empirical relationships for the binding of Sn²⁺ by O-, N- and S-donor ligands, *J. Mol. Liq.* 2014, 200B, 329-339.

- [42] R.M. Cigala, C. De Stefano, A. Irto, D. Milea, and S. Sammartano: Thermodynamic data for the modeling of lanthanoid(III) sequestration by reduced glutathione in aqueous solution *J. Chem. Eng. Data* 2015, 60, 192-201.
- [43] F. Crea, C. De Stefano, D. Milea, A. Pettignano, and S. Sammartano: SALMO and S₃M: A Saliva Model and a Single Saliva Salt Model for Equilibrium Studies, *Bioinorg. Chem. Appl.* 2015, 2015, Article ID 267985, 12 pages. doi:10.1155/2015/267985
- [44] R.M. Cigala, F. Crea, C. De Stefano, C. Foti, D. Milea, and S. Sammartano: Zinc(II) complexes with hydroxocarboxylates and mixed metal species with Tin(II) in different salts aqueous solutions at different ionic strengths: formation, stability and weak interactions with supporting electrolytes, *Monatsh. Chem.* 2015, 146, 527-540.
- [45] C. Bretti, R.M. Cigala, C. De Stefano, G. Lando, D. Milea, and S. Sammartano: On the interaction of phytate with proton and monocharged inorganic cations in different ionic media, and modeling of acid-base properties at low ionic strength, *J. Chem. Thermodyn.* 2015, 90, 51-58.
- [46] C. De Stefano, C. Foti, O. Giuffrè, and D. Milea: Complexation of Hg²⁺, CH₃Hg⁺, Sn²⁺ and (CH₃)₂Sn²⁺ with phosphonic NTA derivatives, *New J. Chem.* 2016, 40, 1443-1553.
- [47] F. Crea, C. De Stefano, C. Foti, G. Lando, D. Milea, and S. Sammartano: Alkali Metal Ion Complexes with Phosphates, Nucleotides, Amino Acids, and Related Ligands of Biological Relevance. Their Properties in Solution, in: " The Alkali Metal Ions: Their Role for Life", *Met. Ions Life Sci.*, Vol. 16, Sigel, A.; Sigel, H.; Sigel, R.K.O.; Eds.; Springer International Publishing AG, Cham, Switzerland, 2016, pp 133-166.
- [48] S. Cataldo, A. Gianguzza, D. Milea, N. Muratore, and A. Pettignano: Pb(II) adsorption by a novel activated carbon – alginate composite material. A kinetic and equilibrium study, *Int. J. Biol. Macromol.* 2016, 92, 769-778.
- [49] F. Crea, C. De Stefano, A. Irto, D. Milea, A. Pettignano, and S. Sammartano: Modeling the Acid-Base Properties of Molybdate(VI) in Different Ionic Media, Ionic Strengths and Temperatures, by EDH, SIT and Pitzer Equations, *J. Mol. Liq.* 2017, 229, 15-26.
- [50] P. Cardiano, R.M. Cigala, M. Cordaro, C. De Stefano, D. Milea, and S. Sammartano: On the complexation of metal cations with “pure” diethylenetriamine-N,N,N’,N’’,N’-pentakis(methylenephosphonic) acid, *New J. Chem.* 2017, 41, 4065-4075.
- [51] C. Bretti, R.M. Cigala, F. Crea, C. De Stefano, G. Gattuso, A. Irto, G. Lando, D. Milea, and Silvio Sammartano: Thermodynamic properties of O-donor polyelectrolytes: determination of the acid–base and complexing parameters in different ionic media at different temperatures, *J. Chem. Eng. Data* 2017, 62, 2676-2688.
- [52] S. Cataldo, A. Gianguzza, D. Milea, N. Muratore, A. Pettignano, and S. Sammartano: A critical approach to the toxic metal ion removal by hazelnut and almond shells, *Env. Sci. Poll. Res.* 2018, 25, 4238-4253.
- [53] S. Cataldo, G. Lando, D. Milea, S. Orecchio, A. Pettignano, and S. Sammartano: A novel thermodynamic approach for the complexation study of toxic metal cations by a landfill leachate, *New J. Chem.* 2018, 42, 7640-7648.
- [54] F. Crea, C. De Stefano, D. Milea, and S. Sammartano: Phytate–molybdate(VI) interactions in NaCl(aq) at different ionic strengths: unusual behaviour of the protonated species, *New J. Chem.* 2018, 42, 7671-7679.

- [55] S. Gama, M. Frontauria, N. Ueberschaar, G. Brancato, D. Milea, S. Sammartano, and W. Plass: Thermodynamic study on 8-hydroxyquinoline-2-carboxylic acid as a chelating agent for iron found in the gut of Noctuid larvae, *New J. Chem.* 2018, 42, 8062-8073.
- [56] S. Cataldo, V. Chiodo, F. Crea, S. Maisano, D. Milea, A. Pettignano: Biochar from byproduct to high value added material – A new adsorbent for toxic metal ions removal from aqueous solutions, *J. Mol. Liq.* 2018, 271, 481-489.
- [57] P. Cardiano, R.M. Cigala, F. Crea, C. De Stefano, D. Milea, S. Sammartano, Characterization of the thermodynamic properties of some benzenepolycarboxylic acids: Acid-base properties, weak complexes, total and neutral species solubility, solubility products in NaCl_{aq} , $(\text{CH}_3)_4\text{NCl}_{\text{aq}}$ and Synthetic Sea Water (SSW), *Fluid Phase Equil.* 2019, 480, 41-52.
- [58] L. Kortazar, D. Milea, O. Gomez-Laserna, L. Fernandez, Accurate determination of total alkalinity in estuarine waters for acidification studies, *Trends Anal. Chem.* 2019, 114, 69-80.
- [59] A. Di Vincenzo, M. Russo, S. Cataldo, D. Milea, A. Pettignano, P. Lo Meo, Effect of pH Variations on the Properties of Cyclodextrin-Calixarene Nanosponges, *Chem. Select* 2019, 4, 6155-6161.
- [60] F. Crea, C. De Stefano, A. Irto, G. Lando, S. Materazzi, D. Milea, A. Pettignano, S. Sammartano, Understanding the Solution Behavior of Epinephrine in the Presence of Toxic Cations: A Thermodynamic Investigation in Different Experimental Conditions. *Molecules* 2020, 25, 511.
- [61] R.M. Cigala, F. Crea, C. De Stefano, A. Irto, D. Milea, S. Sammartano, Thermodynamic Behavior of Polyalcohols and Speciation Studies in the Presence of Divalent Metal Cations. *J. Chem. Eng. Data* 2020, 65, 2805-2812.
- [62] K. Arena, G. Brancato, F. Cacciola, F. Crea, S. Cataldo, C. De Stefano, S. Gama, G. Lando, D. Milea, L. Mondello, A. Pettignano, W. Plass, S. Sammartano, 8-Hydroxyquinoline-2-Carboxylic Acid as Possible Molybdophore: A Multi-Technique Approach to Define Its Chemical Speciation, Coordination and Sequestering Ability in Aqueous Solution. *Biomolecules* 2020, 10, 930-948.
- [63] C. Bretti, P. Cardiano, A. Irto, G. Lando, D. Milea, S. Sammartano: Interaction of N-acetyl-L-cysteine with Na^+ , Ca^{2+} , Mg^{2+} and Zn^{2+} . Thermodynamic aspects, chemical speciation and sequestering ability in natural fluids, *J. Mol. Liq.* 2020, 319, 114164.
- [64] S. Gama, R. Hermenau, M. Frontauria, D. Milea, S. Sammartano, C. Hertweck, W. Plass, Iron Coordination Properties of Gramibactin as Model for the New Class of Diazeniumdiolate Based Siderophores, *Chem. Eur. J.* 2021, 27, 2724–2733.
- [65] S. Cataldo, F. Crea, M. Massaro, D. Milea, A. Pettignano, S. Riela, Functionalized halloysite nanotubes for enhanced removal of Hg_{2+} ions from aqueous solutions, *Clays Clay Miner.* 2021, 69, 117–127.
- [66] S. Cataldo, P. Lo Meo, P. Conte, A. Di Vincenzo, D. Milea, A. Pettignano, Evaluation of adsorption ability of cyclodextrin-calixarene nanosponges towards Pb^{2+} ion in aqueous solution, *Carbohydr. Polym.* 2021, 267, 118151.
- [67] S. Berto, M. Marangella, C. De Stefano, D. Milea, P.G. Daniele, Critical Reappraisal of Methods for Measuring Urine Saturation with Calcium Salts, *Molecules* 2021, 26(11), 3149.

[68] A.igliuto, R.M. Cigala, A. Irto, M.R. Felice, A. Pettignano, D. Milea, S. Materazzi, C. De Stefano, F. Crea: The Solution Behavior of Dopamine in the Presence of Mono and Divalent Cations: A Thermodynamic Investigation in Different Experimental Conditions. *Biomolecules* 2021, 11(9), 1312.

Messina, September 06th, 2021

Yours faithfully

A handwritten signature in black ink, appearing to read 'Demetrio Milea', with a stylized flourish at the end.

(Demetrio Milea)