

**Europass
Curriculum Vitae**



Personal information

First name / Surname

Ion SANDU

Address(es)

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Fax(es)

+40232214816

E-mail

Ion.sandu@uaic.ro, or sandu_i03@yahoo.com

Nationality

Romanian

Date of birth

03.01.1952

Gender

Male

Occupational field

Scientific Conservation of Cultural and Natural Heritage, Environmental Science and Engineering, Materials Science and Technology, Inventics

Work experience

Dates (*from – to*)

01.10.1990 – PRESENT

Occupation or position held

Professor,

Main activities and responsibilities

Director of Laboratory Scientific Investigation and Discipline titular

Name and address of employer

“Al. I. Cuza” University of Iasi, 11 B-ivd Carol I, Iasi, Romania

Type of business or sector

Department of Conservation of Cultural Heritage

Dates (*from – to*)

01.10.2009 –Present

Occupation or position held

Professor

Main activities and responsibilities

Supervisor, PhD Thesis coordinator

Name and address of employer

Environmental Science PhD School (Science of Conservation of the Cultural Heritage and Biodiversity), “Al. I. Cuza” University of Iasi, B-dul Carol I, Iasi, Romania

Type of business or sector

Scientific Conservation and Investigation of Works of Art and Historic Monuments, and Environmental Science and Engineering/PhD in Science of Conservation and Environmental Science and Engineering

Dates (*from – to*)

01.10.2010 –Present

Occupation or position held

Professor

Main activities and responsibilities

Supervisor Project, Master Thesis coordinator

<i>Name and address of employer</i>	Forensic Science Master School "Al. I.Cuza" University of Iasi, B-dul Carol I, Iasi, Romania and "Al.I.Cuza" Police Academy, Aleea Privighetorilor, Bucharest, Romania
<i>Type of business or sector</i>	A Forensic Science Treasures and Counterfeit Documents (Scientific Conservation and Investigation of Works of Art and Historic Monuments Archeological Sites and Old Documents -Forgery and use of forgery), Conservation Materials Traces etc.
<i>Dates (from – to)</i>	01.10.2006 – 01.10.2010
<i>Occupation or position held</i>	Director Partner Project
<i>Main activities and responsibilities</i>	Supervisor Project, PhD Thesis coordinator
<i>Name and address of employer</i>	EPISCON (European PhD in Science for Conservation), Studies University of Bologna/"Al. I.Cuza" University of Iasi, B-dul Carol I, Iasi, Romania
<i>Type of business or sector</i>	Scientific Investigation and Conservation of Cultural Heritage Department
<i>Dates (from – to)</i>	01.10.2005 –Present
<i>Occupation or position held</i>	Director
<i>Main activities and responsibilities</i>	Supervisor research projects and themes,
<i>Name and address of employer</i>	"Al. I.Cuza" University of Iasi, B-dul Carol I, Iasi, Romania
<i>Type of business or sector</i>	Laboratory of Scientific Investigation and Conservation of Cultural Heritage, ARHEOINVEST Research and Education Interdisciplinary Platform
<i>Dates (from – to)</i>	01.10.2000– 01.07.2006
<i>Occupation or position held</i>	Professor
<i>Main activities and responsibilities</i>	Master course: Conservation of Monuments
<i>Name and address of employer</i>	"Gh. Asachi" Technical University of Iasi, B-dul D. Mangeron 71, Iasi, Romania
<i>Type of business or sector</i>	<i>Department of Civilian Constructions and Architecture</i>
<i>Dates (from – to)</i>	01.03.1980 – 31.09.1990
<i>Occupation or position held</i>	Assist. Prof.
<i>Main activities and responsibilities</i>	Discipline titular Supervisor Project and Thesis coordinator
<i>Name and address of employer</i>	"Gh. Asachi" Technical University of Iasi, B-dul D. Mangeron 71, Iasi, Romania
<i>Type of business or sector</i>	Department of Inorganic Chemistry
<i>Dates (from – to)</i>	03.11.2003 – PRESENT
<i>Occupation or position held</i>	President
<i>Main activities and responsibilities</i>	Manager and Supervisor Project
<i>Name and address of employer</i>	Romanian Inventors Forum, Iasi, Romania
<i>Type of business or sector</i>	Research and Innovation Department
Education and training	
<i>Dates</i>	1976 – 1984 Ph.D. Programme "Gh. Asachi" Technical University of Iasi, Romania 1975-1976: Master - "Gh. Asachi" Technical University of Iasi Specialization: Inorganic Chemistry 1971 – 1975: "Gh. Asachi" Technical University of Iasi Specialization: Inorganic Chemistry 1967- 1971: High-School – Moinesti, Bacau, Romania
<i>Title of qualification awarded</i>	Ph.D degree in Chemistry

Personal skills and competences

Mother tongue(s)

Romanian

Other language(s)

Self-assessment

European level (*)

Russian Language

French Language

English Language

Understanding		Speaking				Writing	
Listening		Reading		Spoken interaction		Spoken production	
B2	B1	B2	B1	B2	B1	B2	B1
B2	B1	B2	B1	B2	B1	B2	B1
A2	B1	B1	B2	A2	B1	A2	B1

Social skills and competences

Team work: I have worked in various types of teams from research teams.
 Very good communication skills, team building gifts;
 Creative, high capacity of synthesis of interdisciplinary knowledge, non-discriminating people of different cultures;
 Amazing capacity to receive new information, strong sense of duty, hard-working.

Organisational skills and competences

Good manager (Founding member of two National Institutes for Research and two Academic Associations, 116 Research Projects as Director)
 European Expert in Science for Conservation
 Great capacity for developing laboratories (more than 16).
 Organization of the Technical Creativity Exhibitions (5)
 Organization of International Symposium in Cultural Heritage (7)

Computer skills and competences

Office 2003, Adobe Photoshop,

Other skills and competences

Capacity for developing new devices, methods and techniques for laboratory (36 patents in field)
 Good capacity for implementation of new technologies (6 micro production labs and 130 tested patents)
 Author of wall paintings at two orthodox church
 Three personal exhibition of paintings and four collective exhibition
 The graphic at one poetry book
 Collection keeper
 Restorer

Driving licence

Driving License- B category

Date: 15.02.2013

Signature



Author or co-author of 56 Books, 748 scientific papers (192 abroad), 145 patents (26 abroad), 557 international scientific communications and 279 national.

Director or coordinator of national research programme 109 projects, 6 European projects and research team member in 71 national projects;

Member in International Juries (ARCHIMEDES - Moscow, 2003-2011, NEW-TIMES - Sevastopol, 2006-2014, INFOINVENT - Kishinev, 2005-2014, INOVA – Zagreb, 2008-2014, INVENTICA-Bucharest, 2006-2010, PROINVENT - Cluj Napoca, 2006-2014, EUROINVENT – Iasi, 2009-2014);

Member of Scientific Boards Journals (Rev.Chim. Bucharest, International Journal of Conservation Science, Recent Patent on Corrosion Science Journal, Open Journal of Archeometry, Egyptian Journal of Archaeological and Restoration Studies; International Journal of Criminal Investigation, Chemia Sibiu, Scientifical Annals "Al. I. Cuza" University Iasi, Scientific Annals of University Galati, Inventic Revue Iasi, Danubius Journal Galati, Research Revue Iasi, Patrimony Book, „Al.I.Cuza” University Publishing House, - Coordinated Series. etc.);

Doctor Honoris Causa (Galati 2013, Sofia 2006, New York 1998),

International Research Networks (UNESCO FORUM, University and Cultural Heritage - Valencia, Chair Unesco, Environmental Engineering and Scientific Conservation Cultural Heritage - Iasi, International Innovation Club ARCHIMEDES - Moscow),

Member of National and European Expert Group in Evaluation of the Technical Creativity and Scientifically Expertise, **Main Expert in Impact Studies**, Environment Survey and Conformation and Ecological Rehabilitation Plans Founding-member of the Romanian Scientist Association (1984 - 2011);

Member of International Profesional Society (16)

Prises, Awards (140), Medals (483) and Diplomas (137), 32 first Prize in national invention exhibitions (1980-1989), 272 gold medals, 144 silver medals and 67 bronze medals at international exhibitions of inventions (Barcelona, Pittsburgh, Geneva, Brussels, Moscow, London, Seoul, Barcelona, Zagreb, Varna, Budapest, Taipei, Novi Sad, Kishinev, Sevastopol, Bucharest and Iasi).

Additional information

Excellent results in science of conservation and chemical research

The three structures of metal artefacts patina theory building (primary, secondary and contamination structures); degradation and deterioration effects theory building by micro and macro structural destruction (physical state) and material alteration (chemical nature) process. The normal range of variation of hydric equilibrium of wood theory building, applied in archaeometry and impact studies for preservation process.

Solion theory building for NaCl aerosols.

Electrochemical Conversion of Energy, Science of materials implied in electronics, energetic, restoration and preservation of the cultural national values and biotechnology.

Non-conventional procedures for the synthesis and the physic-structural, chemical and electrochemical characterization of some new materials with technical implications ("Layer-on-layer" sequential co-precipitation by ionic exchange by using the bionics system model; obtaining and characterization of the structures with stratified atomic networks with phonon-absorbent, piro- and/or photoelectric proprieties, proton conduction by the "tunneling effect" in the van der Waals bands of the compacts hexagonal marginal structures of the chalcogenides type from the stratified atoms networks, modification of the "proton-electron" mechanism for the reduction of the monophasic redox couples by there passing in reversible diphasic redox couples).

Technical creativity (invents) in chemistry, metallurgy, chemical engineering, biotechnology and keeping of the cultural national values.

Titular course of Chemistry (general chemistry, descriptive inorganic and organic chemistry), Ecology of Sport Systems, Redox Systems in the Energy Conversion, Invents in Chemistry, Metals and Nemetals Chemistry, Structure and Reactivity of the Compounds, Scientific Investigation of Works of Art, Science of Materials for Restoring and Keeping of the Cultural National Values; Etiopatology of Works of Art, Metal Restoration, Photography and Photo-grammetry; Conventional Representation in Restoration.

Annexes

Author or co-author at 56 Books, 748 scientific papers (192 abroad), 145 patents (26 abroad) 557 International Scientifically communication and 279 National. Coordinator of 109 scientific grants.

Director of National Research Programme 109 projects, 6 European projects and research team member in 71 National Projects;

Doctor Honoris Causa (Galați 2013, Sofia 2006, New York 1998),

International Research Networks (UNESCO FORUM, University and Cultural Heritage - Valencia, Chair Unesco, Environmental Engineering and Scientific Conservation Cultural Heritage - Iasi, International Innovation Club ARCHIMEDES - Moscow),

Member of National and European Expert Group in Evaluation of the Technical Creativity and Scientifically Expertise,

Main Expert in Impact Studies, Environment Survey and Conformation and Ecological Rehabilitation Plans

Member of Professional Society:

- World Invention Intellectual Property Association, Taiwan (2013);
- Founding-member of the Romanian Scientist Association (1984 - 2011);
- Active Member of The New York Academy of Sciences (1984-1996);
- Member of the Invents Committee of the Romanian Academy (1988 - 2011);
- Founding-member of Romanian Invents Society (1991 - 2003);
- Member of the EURISTIKA International Creativity Association (1991, Volgograd);
- Member of the Physical-Chemistry Society (1991 - 2011);
- Corresponding Member of Osterreichische Albert Schweitzer-Gesellschaft, Vienna (1995);
- Member of Institute for International Relations and Intercultural Studies, Alabama University (1997);
- Honorary Member of Osterreichische Albert Schweitzer-Gesellschaft, Vienna (1997);
- Honorary Member of The International Cultural Correspondence Institute, Bombay-India (1997);
- Honorary Diploma of The Parthasarathy International Cultural Academy, Madras-India (1997);
- Honorary Diploma of The "St.Andrew" Assoc., Scotland (1998);
- Member of the Romanian Chemistry Society (2000 - 2011);
- Member of the Romanian Scientific Investigation of Art Society (2002);
- In of the European Extra LabSTECH Institution I am representative for "Al. I. Cuza" University (2001 - 2003);
- President of Romanian Inventors Forum (2003-2011);

Member in International Juries (ARCHIMEDES - Moscow, 2003-2012, NEW-TIMES - Sevastopol, 2006-2012, INFOINVENT - Kishinew, 2005-2012, INOVA – Zagreb, 2008-2012, INVENTICA-Bucharest, 2006-2010, PROINVENT - Cluj Napoca, 2006-2012, EUROINVENT – Iasi, 2009-2012);

Member of Scientific Boards and reviewer of Journals:

- **INTERNATIONAL JOURNAL OF CONSERVATION SCIENCE**, (Print ISSN 2067-533X, Online 2067-8223), "Al.I.Cuza" University of Iasi, (SCOPUS) – **Editor in Chief**;
- **INTERNATIONAL JOURNAL OF CRIMINAL INVESTIGATION**, (Online ISSN:2247-0271), "Al.I.Cuza" Police Academy Bucharest and AIT SRL Laboratories, (BDI) – **Senior Editor**;
- **OPEN JOURNAL OF ARCHAOMETRY** (PAGEPress Publications, Pavia, Italy), (eISSN 2038-1956), (BDI) 2011 – **Editor and scientific reviewer**;
- **REVISTA DE CHIMIE** (ISSN 0034-7752), București (ISI Thomson, **Factor Impact 0.538/2012**) – **Member of scientific board and scientific reviewer**;
- **MATERIAL CHEMISTRY AND PHYSICS**, (ISSN: 0254-0584), ELSEVIER SCIENCE SA (ISI Thomson, **Factor Impact 2.356/2010**) - **Scientific reviewer**;
- **DESALINATION AND WATER TREATMENT**, (ISSN: 1944-3994), (ISI Thomson, **Factor Impact 0.852/2012**) - **Scientific reviewer**;
- **DESALINATION**, (ISSN: 0011-9164), (ISI Thomson, **Factor Impact 3.041/2012**) - **Scientific reviewer**;
- **JOURNAL OF ARCHAEOLOGICAL SCIENCE**, (ISSN: 0305-4403), Elsevier, (ISI Thomson, **Factor Impact 1.710/2010**) - **Scientific reviewer**;
- **JOURNAL OF APPLIED ELECTROCHEMISTRY**, (ISSN: 0021-891X - print version, ISSN: 1572-8838 - electronic version), Springer Netherlands, (ISI Thomson, **Factor Impact 1.496/2010**) - **Scientific reviewer**;
- **JOURNAL OF THERMAL ANALYSIS AND CALORIMETRY**, (ISSN: 1388-6150 Print version si 1572-8943 Online version) Springer Budapest, (ISI Thomson, **Factor Impact 1.752/2010**) - **Scientific reviewer**;
- **THERMOCHIMICA ACTA**, (ISSN: 0040-6031), Elsevier, (ISI Thomson, **Factor impact 1.908/ 2010**) - **Scientific reviewer**;
- **WOOD AND FIBER SCIENCE**, (ISSN: 0735-6161), (ISI Thomson, **Factor impact 0.717/ 2012**) - **Scientific reviewer**;
- **BIORESOURCES** (BR), (ISSN: 1930-2126), (ISI Thomson, **Factor impact 1.309/2012**) - **Scientific reviewer**;
- **AFRICAN JOURNAL OF AGRICULTURAL RESEARCH** (AJAR) (ISSN 1991- 637X), (ISI Thomson, **Factor impact 0.263/2010**) - **Scientific reviewer**;
- **AFRICAN JOURNAL OF MICROBIOLOGY RESEARCH** (AJMR), (ISSN 1996-0808), (ISI Thomson, **Factor impact 0.528/2010**) - **Scientific reviewer**;
- **AFRICAN JOURNAL OF ENGINEERING RESEARCH** (AJER), (BDI) - **Scientific reviewer**;
- **BASIC RESEARCH JOURNAL OF SOCIAL AND POLITICAL SCIENCE** (BRJSPS),(BDI) - **Scientific reviewer**;
- **JOURNAL OF PETROLEUM AND GAS EXPLORATION RESEARCH** (JPGER), (ISSN 2276-6510),(BDI) - **Scientific reviewer**;
- **JOURNAL OF ENGINEERING AND TECHNOLOGY RESEARCH** (JETR) (ISSN:2006-9790), (BDI) - **Scientific reviewer**;
- **RECENT PATENTS ON CORROSION SCIENCE JOURNAL/ INNOVATIONS IN CORROSION AND MATERIALS SCIENCE** (Bentham Science Publishers, New York), (ISSN 1877-6108), (BDI) – **Member of scientific board and scientific reviewer**;

- **EGYPTIAN JOURNAL OF ARCHAEOLOGICAL AND RESTORATION STUDIES**, (print ISSN 2090-4932, eISSN 2090-4940), (BDI) – *Member of scientific board and scientific reviewer*;
- **STUDIA ANTIQUA ET ARCHAEOLOGICA**, Universitatea „Al. I. Cuza” Iași, ISSN (BDI) – *Member of scientific board and scientific reviewer*;
- **ACTA UNIVERSITATIS CIBINIENSIS, Seria F CHEMIA** (ISSN 1583-5030), Universitatea „Lucian Blaga” Sibiu (BDI) – *Member of scientific board and scientific reviewer*; - **ANALELE UNIVERSITĂȚII „DUNĂREA DE JOS” DIN GALAȚI, Fascicula IX METALURGIE ȘI ȘTIINȚA MATERIALELOR** (ISSN 1453-083X), (BDI) – *Member of scientific board and scientific reviewer*;
- **PRO-LIGNO** (ISSN 2069-7430), (BDI) – *Member of scientific board and scientific reviewer*;
- **REVISTA DE INVENTICĂ** (ISSN 1210-3084), National Institute of Inventic Iași (BDI) – *Member of scientific board and scientific reviewer*;
- **REVISTA DANUBIUS** (ISSN 1220-5052), History Muzeum of Galați, (BDI) – *Member of scientific board and scientific reviewer*;
- **PATRIMONY BOOK**, „Al.I.Cuza” University Publishing House, - **Series coordinator**.

Medals (492) and Diplomas (137) at International Exhibition of Invents (Barcelona, Pittsburgh, Geneva, Brussels, Moscow, London, Seoul, Zagreb, Varna, Budapest, Taipei, Novi Sad, Kishinew, Sevastopol, Bucharest and Iasi):

32 first Prize at the National Invention Exhibition (1980-1989),

277 gold medals, 148 silver medals and 67 bronze medals at International Exhibition of Invents (Barcelona, Pittsburgh, Geneva, Brussels, Moscow, London, Seoul, Barcelona, Zagreb, Varna, Budapest, Taipei, Novi Sad, Kishinew, Sevastopol, Bucharest and Iasi):

Prises and Awards (143) at International Exhibition of Invents (Barcelona, Pittsburgh, Geneva, Brussels, Moscow, London, Seoul, Barcelona, Zagreb, Varna, Budapest, Taipei, Novi Sad, Kishinew, Sevastopol, Bucharest and Iasi):

- [1] Special Diploma of the European Arts Academy, (1993);
- [2] “Henri Coanda” Award, 3-rd, 2-rd and 1-st Classes. Romanian Academy (1991-1993);
- [3] Award 1-st Classes, Kishinew,, 1993
- [4] “Stefan cel Mare si Sfânt” Metropolitanate of Iasi (1994);
- [5] “Dimitrie Leonida”, Award 1-st Classes, Technical Museum Bucharest (1996);
- [6] Special Award, Parthasarathy International Cultural Academy, Madras - India, (1997);
- [7] Grand Prix Gold ARCHIMEDES, Moskow, (2004);
- [8] Honorary Diploma, AGEPI, Kishinew, R.Moldova, (2002);
- [9] Honorary Price, AGEPI, Kishinew, R.Moldova, (2004);
- [10] Chevalier Degree of Inventive Merit, Brussels – Belgium (2002);
- [11] Officer Degree of Inventive Merit, Brussels – Belgium (2003);
- [12] Commandor Degree of Inventive Merit, Brussels – Belgium (2004);
- [13] Gold Archimedes, Moskow, GRAND PRIX (2005).
- [14] Commandor Degree “G. Constantinescu” – Cluj-Napoca (2005);
- [15] “Petru Poni” Award 1st Class – Iasi (2005)
- [16] Excelency Dipoma for Culture – Bucharest (2005)
- [17] Prize of National Authority for Research – MedC, Bucharest (2005),
- [18] Great Officer Degree of Inventive Merit, Brussels – Belgium (2005)
- [19] Founding member of International Innovation Club ARCHIMEDES Moskow (2005);
- [20] Honorary Academician of International Academy of Arts and Science, Verbano, Italy (2005);
- [21] Gold Medal ICEPEC, Bruxelles, 2005;
- [22] Grand Prix „Archimede de Aur” 2005;
- [23] Grand Officer Degree of Inventive Merite Order, Brussels – Belgium (2005);
- [24] Excelency Diploma – Romanian Association for Cultural Heritage, Bucharest (2005).
- [25] Excelency Diploma for Research with Gold Medal, Salonul INVENTICA 2005, Bucuresti,
- [26] Special Prize and Silver Cup, MCT-ANCS, București, 2005,
- [27] Special Prize and Gold Cup, „Pricinosti” Superiour School, Ucraina-Estonia-Belgia, 2005,
- [28] Special Prize and Gold Cup, Ajumel Academic Center, Sevastopol, 2005,
- [29] Special Prize and Cristal Cup, Pedagogical Assoc. of Inovators, Sevastopol, 2005;
- [30] Grad de Comandor Order „G. Constantinescu” Cluj-Napoca 2005;
- [31] DOCTOR HONORIS CAUSA, Balkan Academy of Science, Sofia, 2006;
- [32] Gold Medal and RUN Order, Bruxelles, 2006;
- [33] Gold Cup and Special Prize, MOO „Sociopolis in the Ukraine” (Kiev), sept. 2006;
- [34] Gold Cup and Special Prize, „Centri Sodeistvia Radiationoi Iadernoi i Ekologhiceskoi Bezopasnosti” Sevastopol, sept. 2006, Ukraina;
- [35] Attestation as Expert in Scienific Investigation and Conservation, Ministry of Culture, Bucharest, 2007;
- [36] Special Prize, Economic of the Development Agence of City Sevastopol, Ucraina, Moscova , 2007;
- [37] Order „Rojdenia”, Ajumel Academic Center, Sevastopol, Ucraina, 2008;
- [38] Grand Prix and Gold Cup, Technical University of Chișinău, 2008;
- [39] Prize of Inventors Union, R. Moldova, Chisinau, 2009;
- [40] Grand Prix „The Best International Delegation”, INOVA Zagreb, 2009;
- [41] Prize „Honor of Invention”, Taipei, 2009;
- [42] Order GOLD ARCHIMEDES (Ionation International Club of Moskow), Zagreb, 2009;
- [43] Grand Prix and Gold Cup, Technical University of Chișinău, Iași, 2009;

- [44] Grand Prix and Gold Cup, AGEPI- Chişinău, Iaşi , 2009;
- [45] „AS Popov” Medals, International Academy of Inventics of Sankt Petersburg, Iaşi, 2009;
- [46] Special Prize „Nicola TESLA”, Sevastopol 2010,
- [47] Chavalier of the Order STAR ODIN, Sevastopol, 2010,
- [48] Grand Prize „The Best International Delegation”, ATTIC Barcelona 2010;
- [49] Special Prize, International Academy of Inventics, Kiev, 2010
- [50] Special Prize, International Jury, INVENTICA 2010, Iasi;
- [51] Special Prize, National Scientific Book Exhibition, Iasi, 2010 (Scientific Conservation of the Stone Monuments);
- [52] Prize „Excelence in Research”, POLITEHNICA University of Bucuresti, 2010;
- [53] Special Prize of the Innovation Educational Association of Sevastopol, 2011;
- [54] Grand Prix of the Inventics Iranian Institute, 2011;
- [55] Special Award of the Croatian Inventors Association, 2011;
- [56] Creativity Order of the Superior School „Pricinosti” of Sevastopol, 2011;
- [57] Special Award of the Science Academy of Ukraine, 2011;
- [58] Diplom and Gold Medal of AGEPI, Kishinew, 2011;
- [59] Diplom and Gold Medal of Technical University of Moldova, Kishinew, 2011;
- [60] Diplom and Gold Medal of Medicine University of Moldova, Kishinew, 2011;
- [61] Best European Invention, Pittsburgh, 2012;
- [62] Sport & Recreation Best Invention, Zagreb/Zibenik, 2012;
- [63] Grand Prize with scarf „King Sejong Inventors Order of Merit”, Seoul, 2012;
- [64] Prize Honor of Inventions, World Invention Intellectual Property Association, Taiwan (2013);
- [65] Medalia Jubiliara a Academiei de Stiinte din Republica Moldova, 05.05.2013.
- [66] Grand Prix at Moldavian Technical University, INFOINVENT 2013, Chişinău;
- [67] Leading Inovation Award for New procedure on potabilization water, Invention Show & Technomart, IIPNF – International Intellectual Property Network Forum, Taipei, Nov. 2013;
- [68] Leading Inovation Award for Device of administration phytosanitary substances in ligneous plants, Invention Show & Technomart, IIPNF – International Intellectual Property Network Forum, Taipei, Nov. 2013;
- [69] INOVA Best International Exhibitor Award, International Invention Show - INOVA, Zagreb, 12-17 Nov. 2013;
- [70] Award for International Innovation Achievements – HALLER ProInventio Foundation, International Invention Show - INOVA, Zagreb, 12-17 Nov. 2013;
- [71] Honor of Invention – WIIPA for New Procedure on potabilization water, International Invention Show - INOVA, Zagreb, 12-17 Nov. 2013;
- [72] Honor of Invention – WIIPA for Device of administration phytosanitary substances in ligneous plants, International Invention Show - INOVA, Zagreb, 12-17 Nov. 2013;
- [73] WIIPA Order, World Invention Intellectual Property Association, Taiwan;
- [74] Special Priz Best Invention, Istambul Aydin University;
- [75] Special Award CIGIF 2013, Seoul Korea;
- [76] Certificate of Excellence in Reviewing for 2013, awarded in recognition of an outstanding contribution of the quality of the **Journal of Archaeologica Science**, Elsevier and Society for Archaeological Science, 2014;
- [77] EYRec Creative Invention Award, Paun Putra, University of Malaysia Perlis, 2014;
- [78] World Invention Intellectual Property Association Award (WIIPA - 2 prix), i-ENVEX 2014;
- [79] Korea University Invention Association Award (KUIA), i-ENVEX 2014;
- [80] Association of Young Innovator and Scientist Indonesia Award (AYISI), i-ENVEX 2014;
- [81] WIIPA Honor of Invention, Best International Exhibit, Zagreb, 2014;
- [82] Volga State University of Technology Award, Zagreb, 2014;
- [83] Distinctia In Memoriam Prof.dr.ing. Ioan POP, Technical University of Cluj-Napoca, 2014.

Excellent results in science of conservation and chemical research:

The three structures of metal artefacts patina theory building (primary, secondary and contamination structures); degradation and deterioration effects theory building by micro and macro structural destruction (physical state) and material alteration (chemical nature) process. The normal range of variation of hydric equilibrium of wood theory building, applied in archaeometry and impact studies for preservation process.

Solion theory building for NaCl aerosols.

Electrochemical Conversion of Energy, Science of materials implied in electronics, energetic, restoration and preservation of the cultural national values and biotechnology.

Non-conventional procedures for the synthesis and the physic-structural, chemical and electrochemical characterization of some new materials with technical implications (“Layer-on-layer” sequential co-precipitation by ionic exchange by using the bionics system model; obtaining and characterization of the structures with stratified atomic networks with phonon-absorbent, piro- and/or photoelectric proprieties, proton conduction by the “tunneling effect” in the van der Waals bands of the compacts hexagonal marginal structures of the chalcogenides type from the stratified atoms networks, modification of the “proton-electron” mechanism for the reduction of the monophasic redox couples by there passing in reversible diphasic redox couples).

Technical creativity (invents) in chemistry, metallurgy, chemical engineering, biotechnology and keeping of the cultural national values.

Titular course of Chemistry (general chemistry, descriptive inorganic and organic chemistry), Redox Systems in the Energy Conversion, Invents in Chemistry, Metals Chemistry, Structure and Reactivity of the Compounds, Scientific Investigation of Works of Art, Science of Materials for Restoring and Keeping of the Cultural National Values; Etiopatology of Works of Art, Metal Restoration, Photography and Photo-grammetry; Conventional Representation in Restoration.