

Curriculum vitae

Informatii personale

Nume/Prenume **Dumbrava Anca**
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Cetatenia română

Locul de munca vizat / Aria ocupationala

Profesor universitar

Experienta profesionala

Perioada	1.10.2016 - prezent
Funcția sau postul ocupat	Profesor universitar
Principalele activități și responsabilități	<p><i>Activitatea de cercetare</i> desfășurată constă în realizarea de studii, publicarea de articole, participarea la conferințe naționale și internaționale, la realizarea proiectelor de cercetare științifică. Domeniile principale de studiu cuprind sinteza și caracterizarea unor materiale anorganice și aplicarea lor în domenii ca celulele solare de tip DSSC, fotocataliza, protecția mediului etc.</p> <p>Membră în 10 proiecte naționale și internaționale.</p> <p><i>Activitatea didactică:</i></p> <ul style="list-style-type: none">- cursuri și laboratoare la disciplinele: chimie, chimia metalelor, chimie coordinativă, chimie bioanorganică, structura compușilor anorganici, chimie anorganică;- coordonarea lucrărilor de licență și disertație (peste 25);- tutore pentru studenții din anul II Chimie. <p><i>Activități de evaluare:</i></p> <ul style="list-style-type: none">- membră în comisiile de licență și disertație. <p><i>Alte activități:</i></p> <ul style="list-style-type: none">- membră în consiliul Facultății de Științe Aplicate și Inginerie;- membră în comitetul de conducere a filialei Constanța a Societății de Chimie din România. <p>- activitatea editorială:</p> <ul style="list-style-type: none">- editor șef al revistei „Ovidius University Annals of Chemistry”;- editor al publicației „International Conference „Chimia”. Book of abstracts”;- editor al publicației „Food Chemistry & Engineering. Book of abstracts”;- membru în comiterul editorial al revistei ISI „Scientific Study & Research Chemistry & Chemical Engineering, Biotechnology, Food Industry”; <p>- recenzor asociat la reviste internaționale ca Journal of Nanoparticles Research, Materials Science in Semiconductors Processing, Materials Physics and Chemistry, etc.</p>
Perioada	1.09.2005 – 30.09.2016
Funcția sau postul ocupat	Conferențiar universitar
Principalele activități și responsabilități	Activitate didactică și de cercetare
Numele și adresa angajatorului	Universitatea Ovidius din Constanța
Tipul activității sau sectorul de activitate	Invațământ superior

Perioada	15.02.1996 - 31.08.2005
Functia sau postul ocupat	Şef de lucrări
Principalele activităţi şi responsabilităţi	Activitate didactică şi de cercetare
Numele şi adresa angajatorului	Universitatea Ovidius din Constanţa
Tipul activitatii sau sectorul de activitate	Invatamant superior
Perioada	1.09.1990 - 14.02.1996
Functia sau postul ocupat	Asistent universitar
Principalele activitati si responsabilitati	Activitate didactica si de cercetare
Numele si adresa angajatorului	Universitatea Ovidius din Constanta
Tipul activitatii sau sectorul de activitate	Invatamant superior
Perioada	1.09.1986 – 31.08.1990
Functia sau postul ocupat	Profesor chimie
Principalele activitati si responsabilitati	Activitate didactica
Numele si adresa angajatorului	Liceul industrial de chimie Navodari
Tipul activitatii sau sectorul de activitate	Invatamant liceal

Educatie si formare

Perioada	15.06.1993 – 15.06.2001
Calificarea / diploma obtinuta	Doctor in chimie
Domenii principale studiate / competente dobindite	Chimie
Numele si tipul institutiei de invatamint / furnizorului de formare	Universitatea din Bucureşti
Nivelul de clasificare a formei de invatamint / formare	Doctorat
Perioada	15.09.1981 – 15.06.1986
Calificarea / diploma obtinuta	Licenţiat în chimie
Domenii principale studiate / competente dobindite	Chimie
Numele si tipul institutiei de invatamint / furnizorului de formare	Institutul Politehnic Bucureşti
Nivelul de clasificare a formei de invatamint / formare	Licenţă

Aptitudini si competente personale

Limba materna

Limbi straine cunoscute

Autoevaluare

Nivel european ()*

Limba engleza

Limba franceza

Română

Comprehensiune				Vorbit				Scris	
Abilitati de ascultare		Abilitati de citire		Interactiune		Exprimare			
B1	Baza	B2	Avansat	B1	Baza	B1	Baza	B2	Intermediar
A2	Introdactiv	A2	Introdactiv	A1	Introdactiv	A1	Introdactiv	A1	Introdactiv

() Cadrului european de referință pentru limbi*

Competente si abilitati sociale

Aptitudini pentru munca în echipă, perseverență, bun coordonator, deschis către dialog.
În activitatea didactică – corectitudine, cinstite, răbdare, comunicativitate.

Competente si aptitudini organizatorice

Competențe ca organizator și coordonator. Inițiativă, imaginație, creativitate în activitatea de cercetare și în realizarea proiectelor.
Membru în comitete de organizare pentru conferințe și workshop-uri, naționale și internaționale.

Competente si aptitudini tehnice

Domenii de interes științific:
Chimie anorganică
Chimia metalelor
Chimie coordinativă
Chimie bioanorganică
Chimia materialelor

Competente si cunostinte de utilizare a calculatorului

Sistemul Windows

Anexe

Lista de lucrari

31.01.2018

Lista de lucrări

1. **Anca Dumbrava**, Daniela Berger, Cristian Matei, Marius Daniel Radu, Emma Gheorghe, Characterization and applications of a new composite material obtained by green synthesis, through deposition of zinc oxide onto calcium carbonate precipitated in green seaweeds extract, *Ceramics International*, in press. Doi: 10.1016/j.ceramint.2017.12.084
2. **Anca Dumbrava**, Daniela Berger, Gabriel Prodan, Florin Moscalu and Aurel Diacon, Considerations about the dependence of PEGylated ZnS nanoparticles properties on the synthesis method, *Zeitschrift für Physikalische Chemie* 232 (2018) 61–77. Doi: 10.1515/zpch-2017-0005.
3. **Anca Dumbrava**, Daniela Berger, Gabriel Prodan, Cristian Matei, Florin Moscalu, Aurel Diacon, Influence of synthesis route on the structure and properties of zinc oxide nanoparticles functionalized with anthocyanins from raw vegetable extracts, *ECS Journal of Solid State Science and Technology* 6 (2017), P870-P878. Doi: 10.1149/2.0311712jss
4. **Anca Dumbrava**, Daniela Berger, Gabriel Prodan, Cristian Matei, Florin Moscalu, Aurel Diacon. The influence of Triton X-100 surfactant on the morphology and properties of zinc sulfide nanoparticles for applications in azo dyes degradation, *Materials Chemistry and Physics* 193 (2017) 316-328. Doi: 10.1016/j.matchemphys.2017.02.040
5. **Anca Dumbrava**, Daniela Berger, Gabriel Prodan, Florin Moscalu, Aurel Diacon. Facile synthesis, characterization and application of functionalized cadmium sulfide nanopowders, *Materials Chemistry and Physics* 173 (2016) 70 - 77. Doi: 10.1016/j.matchemphys.2016.01.040
6. **Anca Dumbrava**, Daniela Berger, Gabriel Prodan, Florin Moscalu. Functionalized ZnO/CdS composites: synthesis, characterization and photocatalytic applications, *Chalcogenide Letters* 13 (2016) 105 – 115.
7. **Anca Dumbrava**, Jeanina Lungu, Alexandru Ion. Green seaweeds extract as co-sensitizer for dye sensitized solar cells, *Scientific Study & Research Chemistry & Chemical Engineering, Biotechnology, Food Industry* 17 (2016) 013 – 025.
8. **Anca Dumbrava**, Gabriel Prodan, Adrian Georgescu, Florin Moscalu, Dependence of ZnO-based dye-sensitized solar cell characteristics on the layer deposition method, *Bulletin of Materials Science* 38 (2015) 1–8. Doi:10.1007/s12034-014-0793-8
9. **Anca Dumbrava**, Rodica Olar, Mihaela Badea, Catalin Maxim, Daniela Ghica, Marius Andruh. New coordination polymers with chromato bridges: $^1_{\infty}[\text{Ni}(\text{phen})(\text{H}_2\text{O})_2(\mu-$

- O₂CrO₂] and ³_∞[Mn(4,4'-bipy)(H₂O)(μ -O₃CrO)]·H₂O, *Inorganica Chimica Acta* 426 (2015) 50–54. Doi:10.1016/j.ica.2014.11.009
10. **A. Dumbrava**, G. Prodan, D. Berger, M. Bica. Properties of PEG-capped CdS nanopowders synthesized under very mild conditions, *Powder Technology* 270 (2015) 197-204. Doi: 10.1016/j.powtec.2014.10.012
 11. **A. Dumbrava**, S. Birghila, M. Munteanu. Contributions on enhancing the copper uptake by using natural chelators, with applications in soil phytoremediation, *International Journal of Environmental Science and Technology* 12 (2015) 929-938. Doi: 10.1007/s13762-013-0467-x
 12. Jeanina Lungu, Adrian Georgescu, **Anca Dumbrava**. Enhancing the efficiency of azo-based dye sensitized solar cells by surface treatments, *Scientific Study & Research. Chemistry & Chemical Engineering, Biotechnology, Food Industry* 16 (2015) 069 – 074.
 13. **A. Dumbrava**, R. Olar, M. Badea, M. N. Grecu, F. Patrascu, L. Marutescu, N. Stanica. Synthesis and characterisation of Ni(II), Cu(II), and Zn(II) complexes with an acyclic Mannich base functionalised with thioglycolate moiety, *Journal of Thermal Analysis and Calorimetry* 115 (2014) 2447–2455. Doi: 10.1007/s10973-013-3437-0
 14. **A. Dumbrava**, G. Prodan, F. Moscalu. Investigations on the influence of surfactant in morphology and optical properties of zinc oxide nanopowders for dye-sensitized solar cells applications, *Materials Science in Semiconductor Processing* 16 (2013) 1095–1104. Doi: 10.1016/j.mssp.2013.03.007
 15. C. I. Oprea, P. Panait, J. Lungu, D. Stamate, **A. Dumbravă**, F. Cimpoesu, M. A. Gîrțu. DFT Study of Binding and Electron Transfer from a Metal-Free Dye with Carboxyl, Hydroxyl, and Sulfonic Anchors to a Titanium Dioxide Nanocluster, *International Journal of Photoenergy*, volume 2013 (2013), article ID 893850, 15 pages. Doi:10.1155/2013/893850
 16. **Anca Dumbrava**, Semaghiul Birghila, Daniela Stamate. Considerations on the influence of complexation in the copper uptake and translocation, *Scientific Study & Research. Chemistry & Chemical Engineering, Biotechnology, Food Industry* 14 (2013) 135 – 144.
 17. C. I. Oprea, **A. Dumbrava**, I. Enache, A. Georgescu, M. A. Girtu. A combined experimental and theoretical study of natural betalain pigments used in dye-sensitized solar cells, *Journal of Photochemistry and Photobiology A: Chemistry* 240 (2012) 5– 13.
 18. **A. Dumbravă**, I. Enache, C. I. Oprea, A. Georgescu, M. A. Gîrțu. Toward a more efficient utilisation of betalains as pigments for Dye-Sensitized Solar Cells, *Digest Journal of Nanomaterials and Biostructures* 7 (2012) 339 – 351.
 19. Comeliu I. Oprea, **Anca Dumbrava**, Irina Enache, Jeanina Lungu, Adrian Georgescu, Florin Moscalu, Camelia Oprea and Mihai A. Girtu. Role of energy level alignment in solar cells sensitized with a metal-free organic dye: A combined experimental and theoretical approach, *Physica Status Solidi A* 208 (2011) 2467–2477. Doi: 10.1002/pssa.201127083

20. C. I. Oprea, F. Moscalu, **A. Dumbrava**, S. Ioannou, A. Nicolaidis, M. A. Girtu. DFT study of the optical and vibration spectra of a series of platinum-olefin complexes, *Romanian Journal of Physics* 56 (2011) 125 – 133.
21. J. Lungu, C. I. Oprea, **A. Dumbravă**, I. Enache, A. Georgescu, C. Rădulescu, I. Ioniță G. V. Cimpoca, M. A. Girtu. Heterocyclic azodyes as pigments for dye sensitized solar cells – A combined experimental and theoretical study, *Journal of Optoelectronics and Advanced Materials* 12 (2010) 1969 – 1975.
22. **A. Dumbrava**, C. Badea, G. Prodan, V. Ciupina. Synthesis and characterization of cadmium sulfide obtained at room temperature, *Chalcogenide Letters* 7 (2010) 111 – 118.
23. S. Birghila, I. Enache, **A. Dumbrava**. Spectrophotometric determination of iron in soil samples by standard addition method, Proceedings of the 10th International Symposium on Metal Elements in Environment, Medicine and Biology Timișoara 2010, pp. 107 - 110 (2010). ISSN 1583-4204
24. **A. Dumbrava**, S. Birghila, M. Belc. A comparison between different extraction methods used for the determination of iron mobile forms, Proceedings of the 10th International Symposium on Metal Elements in Environment, Medicine and Biology Timișoara 2010, pp. 131 - 134 (2010). ISSN 1583-4204
25. C. I. Oprea, F. Moscalu, **A. Dumbravă**, S. Ioannou, A. Nicolaidis, M. A. Girtu. Optical and infrared properties of a series of pyramidalized olefin Pt-complexes - DFT study, *Journal of Optoelectronics and Advanced Materials* 11 (2009) 1773 – 1778.
26. **A. Dumbrava**, C. Badea, G. Prodan, I. Popovici, V. Ciupina. Zinc sulfide fine particles obtained at low temperature, *Chalcogenide Letters* 6 (2009) 437 – 443.
27. **A. Dumbrava**, S. Birghila. Analysis of Some Metal Levels in Danube River Water, *Environmental Engineering and Management Journal* 8 (2009) 219 - 224.
28. C. I. Oprea, **A. Dumbrava**, F. Moscalu, A. Nicolaidis, M. A. Girtu. DFT Study of Optical Properties of Pt-based Complexes, AIP Conference Proceedings 1203, 7th International Conference of the Balkan Physical Union, Alexandroupolis, Greece, 9-13 September 2009, pp. 1198 – 1203.
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31. R. Olar, M. Badea, O. Carp, D. Marinescu, V. Lazar, C. Balotescu, **A. Dumbrava**, „Synthesis, characterisation and thermal behaviour of some thiosulfato- and sulfatocopper (II) complexes”, *Journal of Thermal Analysis and Calorimetry* 92 (2008) 245 – 251. Doi: 10.1007/s10973-007-8768-2
32. V. Ciupina, **A. Dumbrava**, I. Morjan, G. Prodan, M. Prodan, F. Dumitrache, E. Vasile. ZnO nanoparticles obtained by hydrothermal method at low temperature, Proceedings of

- SPIE - The International Society for Optical Engineering, vol. 7039, article number 703911 (2008).
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 36. **A. Dumbrava**, V. Ciupina, B. Jurca, G. Prodan, M. Brezeanu. Mixed complex sulfides of cadmium and iron with *p*-diaminobenzene as ligand, *Revue Roumaine de Chimie* 51 (2006) 871 – 875.
 37. **A. Dumbrava**, M. Botnariuc, E. Feizula. Compounds of zinc with rhodanines and their antimicrobial properties, *Ovidius University Annals of Chemistry* 17 (2006) 252 – 255.
 38. I. Carazeanu Popovici, M. Girtu, **A. Dumbrava**, E. Chirila, V. Ciupina, G. Prodan, “Preparation and characterisation of nano-TiO₂ powder”, *Ovidius University Annals of Chemistry* 17 (2006) 230 – 233.
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 41. **A. Dumbrava**, V. Ciupina, G. Prodan. Dependence on grain size and morphology of ZnS particles by the synthesis route, *Romanian Journal of Physics* 50 (2005) 831 – 836.
 42. S. Dobrinias, S. Birghila, **A. Dumbrava**. Determination of Fe, Cu and Cr from surface waters by standard addition method, *Ovidius University Annals of Chemistry* 16 (2005) 51 – 53.
 43. S. Birghila, **A. Dumbrava**, S. Dobrinias. Determination of heavy metals from ecosystem of Vrancea Mountains, *Environmental Engineering and Management Journal* 3 (2004) 695 – 700.
 44. **A. Dumbrava**, V. Ciupina, G. Prodan. Control of grain size and morphology of CdS particles by the synthesis route, *Romanian Journal of Physics* 49 (2004) 265–272.
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46. **A. Dumbrava**, R. Olar. Complex compounds with mixed ligands. III. Complex compound of zinc and iron with *p*-diaminobenzene and thiosulfate, *Ovidius University Annals of Chemistry* 15 (2004) 5 – 8.
47. **A. Dumbrava**. Aspects of the biological chemistry of zinc, *Farmacia* LII (2004) 94-104.
48. **A. Dumbrava**, S. Birghila, S. Dobrinas. Analytical characterization of an ecosystem of Vrancea Mountains, *Ovidius University Annals of Chemistry* 14 (2003) 36 – 38.
49. R. Olar, D. Marinescu, E. Cristurean, M. Badea, L. Ivan, **A. Dumbrava**. Template condensation reaction. XI. Ba(II), Ni(II), Co(II) and Cu(II) complexes with the Schiff base derived from 2, 2' - methylenebiscyclohexanone and diethylenetriamine, *Ovidius University Annals of Chemistry* 13 (2002) 5 – 9.
50. M. Badea, R. Olar, D. Marinescu, E. Cristurean, L. Ivan, **A. Dumbrava**. Complexes with triazole derivatives. I. Mononuclear complexes of Ni(II) and Cu(II) with 1-imethylamino-N-(*o*-tolyl)s-1H-benzotriazole, *Ovidius University Annals of Chemistry* 13 (2002) 10 – 13.
51. **A. Dumbrava**, R. Olar, I. Enache. Complex compounds with mixed ligands. II. Complex compounds of cadmium and iron with *p*-diaminobenzene and thiosulfate, *Ovidius University Annals of Chemistry* 12 (2001) 5 – 8.
52. **A. Dumbrava**, S. Dan. Metallothioneins, *Farmacia* XLIX (2001) 69-77.
53. **A. Dumbrava**, N. Rasanu, V. Ionescu. Metal complex dyestuffs. I. Zinc (II) complexes of disazodyestuffs, *Ovidius University Annals of Chemistry* 10 (1999) 19 – 24.
54. E. Cristurean, R. Olar, **A. Dumbrava**. Template condensation reactions. V. Complex of Mn(III) with a macrocyclic ligand resulted from [2+2] condensation reaction of triethylenetetramine with *m*-phthalic acid dichloride, *Ovidius University Annals of Chemistry* 10 (1999) 5 – 11.
55. E. Cristurean, R. Olar, **A. Dumbrava**. Template condensation reactions. VI. Complexes of Cr (III) with a macrocyclic ligand resulted from [2+2] condensation reaction of triethylenetetramine with *m*-phthalic acid chloride, *Ovidius University Annals of Chemistry* 10 (1999) 12 – 18.
56. **A. Dumbrava**, R. Olar, F. C. Enoae. Complex compounds of Zn(II) and Cd(II) with rhodanine, *Ovidius University Annals of Chemistry* 9 (1998) 5 – 10.
57. **A. Dumbrava**, R. Olar, L. Iacob. Complex compounds with mixed ligands. I. Complex compounds of Zn(II) and Cd(II) with *p*-diaminobenzene and thiosulfate, *Ovidius University Annals of Chemistry* 9 (1998) 11 – 17.
58. E. Cristurean, D. Marinescu, L. Ivan, R. Olar, M. Badea, **A. Dumbrava**. Template condensation reactions involving ethylenediamine and carbonyl derivatives. III. Complexes of Fe(II) and Co(II) resulting in the system bisoxo-2, 2'-biscyclohexylmethane and ethylenediamine, *Ovidius University Annals of Chemistry* 7 (1996) 1 – 5.
59. E. Cristurean, D. Marinescu, R. Olar, M. Badea, **A. Dumbrava**. Template condensation reactions involving ethylenediamine and carbonyl derivatives. IV. Complexes of Cr(III)

- and Co(III) resulting in system diethylbarbituric acid – ethylenediamine, *Ovidius University Annals of Chemistry* 7 (1996) 6 – 11.
60. D. Marinescu, E. Cristurean, M. Badea, R. Olar, I. Baci, **A. Dumbrava**, Complex compounds with heterocyclic ligands. II. Ni(II) and Cu(II) complexes with 2, 3 – dihydroxyquinoxaline, *Ovidius University Annals of Chemistry* 7 (1996) 12 – 16.
61. D. Marinescu, E. Cristurean, M. Badea, R. Olar, G. Loloiu, **A. Dumbrava**. Complex compounds with heterocyclic ligands. III. Complex compounds of Zn(II) and Cd(II) with isatin derivatives, *Ovidius University Annals of Chemistry* 7 (1996) 17 – 22.
62. E. Cristurean, D. Marinescu, R. Olar, M. Badea, **A. Dumbrava**. Complexes of Fe(II), Ni(II) and Cu(I) with 2-amino-5-mercapto-1,3,4-thiadiazole, *Ovidius University Annals of Chemistry* 5 (1994) 10 – 16.
63. D. Marinescu, E. Cristurean, M. Badea, R. Olar, **A. Dumbrava**. Zn(II) complexes with disubstituted 1,3,4-thiadiazole, *Ovidius University Annals of Chemistry* 5 (1994) 17 – 22.
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65. **A. Dumbrava**. Synthesis of some aromatic amines, *Ovidius University Annals of Chemistry* 4 (1993) 18 – 24.
66. R. Olar, **A. Dumbrava**. Complex of Fe(II) with 2 - amino - 5 - mercapto - 1, 3, 4 - thiadiazole, *Ovidius University Annals of Chemistry* 3 (1992) 5 – 8.
67. S. Birghila, **A. Dumbrava**. Aspects of the aquatic sedimentology studies, *Ovidius University Annals of Chemistry* 3 (1992) 36 – 39.
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31.01.2018