

# Vuk Uskoković

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## Personal Information:

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**Date of Birth:** September 2, 1976

**Place of Birth:** Belgrade, Yugoslavia

**Citizenships:** Serbia, Slovenia (European Union), United States

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## Education/Training:

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**2010 – 2013: NIH Pathway to Independence Fellowship, *Controlled Drug Delivery***

Dept. Of Bioengineering and Therapeutic Sciences, University of California San Francisco, CA, USA

**2007 – 2010: Postdoctoral Scholarship, *Biomaterialization and Biomimetics***

Dept. of Preventive and Restorative Dental Sciences, University of California San Francisco, CA, USA

**2006 – 2007: Postdoctoral Scholarship, *Colloid Chemistry and Fine Particle Synthesis***

Center for Advanced Materials Processing, Clarkson University, Potsdam, NY, 2006 – 2007.

**2003 – 2006: Doctor of Philosophy (Ph.D.), *Nanoscience and Nanotechnologies***

Jožef Stefan Institute, Ljubljana, Slovenia, 2006.

**2001 – 2003: Master of Science (M.Sc.), *Materials Science & Engineering***

University of Kragujevac, Serbia and Montenegro, 2003.

**1995 – 2001: Bachelor of Science (B.Sc.) and Master of Science (MS), *Physical Chemistry***

University of Belgrade, Yugoslavia, 2001.

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## Professional experience:

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**2019 – Present, Visiting Assistant Professor of Mechanical and Aerospace Engineering**

Department of Mechanical and Aerospace Engineering, Henry Samueli School of Engineering, University of California, Irvine, CA, USA.

**2016 – 2019, Adjunct Assistant Professor of Bioengineering**

Department of Bioengineering, School of Medicine and School of Engineering, University of Illinois, Chicago, IL, USA.

**2016 – 2018, Assistant Professor of Biomedical and Pharmaceutical Sciences**

Head, Advanced Materials and Nanobiotechnology Lab, Department of Biomedical and Pharmaceutical Sciences, Center for Targeted Drug Delivery, Chapman University, Irvine, CA, USA.

### **2013 – 2016, Assistant Professor of Bioengineering**

Head, Advanced Materials and Nanobiotechnology Lab, Department of Bioengineering, School of Medicine and School of Engineering, University of Illinois, Chicago, IL, USA.

### **2010 – 2013, Staff Scientist**

Therapeutic Micro and Nanotechnology Laboratory, Department of Bioengineering and Therapeutic Sciences, Schools of Pharmacy and Medicine, University of California, San Francisco, CA, USA.

### **2007 – 2010, Postdoctoral Research Scientist**

Division of Biomaterials and Bioengineering, Department of Preventive and Restorative Dental Sciences, School of Dentistry, University of California, San Francisco, CA, USA

### **2006 – 2007, Postdoctoral Research Scientist**

Colloid and Nanoparticle Research Group, Center for Advanced Materials Processing, Wallace H. Coulter School of Engineering, Clarkson University, Potsdam, NY, USA

### **2002 – 2006, Research Scientist**

Advanced Materials Department, Jožef Stefan Institute, Ljubljana, Slovenia

### **2001, Research Intern**

Institute of Technical Sciences, Serbian Academy of Sciences and Arts, Belgrade, Yugoslavia

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## **Publications:**

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### **Research Articles:**

**Note:** Names of Dr. Uskoković's mentees are italicized.

Julietta V. Rau, Inna V. Fadeeva, Alexander S. Fomin, Katia Barbaro, Ettore Galvano, Alexander P. Ryzhov, Fadis Murzakhanov, Marat Gafurov, Sergei Orlinskii, Iulian Antoniac, **Vuk Uskoković** - “*Sic Parvis Magna: Manganese-Substituted Tricalcium Phosphate and Its Biophysical Properties*”, *ACS Biomaterials Science and Engineering* (in press, 2019).

*Mohamed K. Ahmed*, S. F. Mansour, Reem Al-Wafi, S. I. El-dek, **Vuk Uskoković** – “Tuning the Mechanical, Microstructural and Cell Adhesion Properties of Electrospun  $\epsilon$ -Polycaprolactone Microfibers by Doping Selenium-Containing Carbonated Hydroxyapatite as the Reinforcing Agent with Magnesium Ions”, *Journal of Materials Science* 54 (23) 14524 – 14544 (2019).

**Vuk Uskoković** - “Disordering the Disorder as the Route to a Higher Order: Incoherent Crystallization of Calcium Phosphate through Amorphous Precursors”, *Crystal Growth and Design* 19 (8) 4340 – 4357 (2019).

**Vuk Uskoković**, Ivona Janković-Častvan, *Victoria M. Wu* – “Bone Mineral Crystallinity Governs the Orchestration of Ossification and Resorption during Bone Remodeling”, *ACS Biomaterials Science and Engineering* 5, 3483 – 3498 (2019).

- Vuk Uskoković** - “Mechanism of Formation Governs the Mechanism of Release of Antibiotics from Calcium Phosphate Powders and Cements in a Drug-Dependent Manner”, *Journal of Materials Chemistry B* 7, 3982 – 3992 (2019).
- Mohamed K. Ahmed, Rania Ramadan, S. I. El-dek, **Vuk Uskoković** - “Complex Relationship between Alumina and Selenium-Doped Carbonated Hydroxyapatite as the Ceramic Additives to Electrospun Polycaprolactone Scaffolds for Bone Tissue Engineering”, *Journal of Alloys and Compounds* 801, 70 – 81 (2019).
- Vuk Uskoković**, Sean Tang, Victoria M. Wu – “Targeted Magnetic Separation of Biomolecules and Cells using Earthlike-Based Ferrofluids”, *Nanoscale* 11, 11236 – 11253 (2019).
- Alessio Adamiano, Victoria M. Wu, Francesca Carella, Gianrico Lamura, Anna Tampieri, Michele Iafisco, **Vuk Uskoković** – “Magnetic Calcium Phosphates Nanocomposites for the Intracellular Hyperthermia of Cancers of Bone and Brain”, *Nanomedicine* 14 (10) 1267 – 1289 (2019).
- Vuk Uskoković**, Eric Huynh, Sean Tang, Sonja Jovanović, Victoria M. Wu – “Colloids or Powders: Which Nanoparticle Formulations Do Cells Like More?” *Colloids and Surfaces B: Biointerfaces* 181, 39 - 47 (2019).
- Vuk Uskoković**, Sean Tang, Marko G. Nikolić, Smilja Marković, Victoria M. Wu – “Calcium Phosphate Nanoparticles as Intrinsic Inorganic Antimicrobials: In Search of a Key Particle Property”, *Biointerphases* 14, 031001 (2019).
- Victoria M. Wu, Eric Huynh, Sean Tang, **Vuk Uskoković** – “Brain and Bone Cancer Targeting by a Ferrofluid Composed of Superparamagnetic Iron-Oxide/Silica/Carbon Nanoparticles (Earthlikes)”, *Acta Biomaterialia* 88, 422 – 447 (2019).
- Nenad L. Ignjatović, Radmila Janković, **Vuk Uskoković**, Dragan P. Uskoković – “Effects of Hydroxyapatite@Poly-Lactide-Co-Glycolide Nanoparticles Combined with Pb and Cd on Liver and Kidney Parenchyma after the Reconstruction of Mandibular Bone Defects”, *Toxicology Research* 8, 287 – 296 (2019).
- Vuk Uskoković**, Valerio Graziani, Victoria M. Wu, Inna V. Fadeeva, Alexander S. Fomin, Igor A. Presniakov, Marco Fosca, Marzo Ortenzi, Ruggero Caminiti, Julietta V. Rau – “Gold is for the Mistress, Silver for the Maid: Enhanced Mechanical Properties, Osteoinduction and Antibacterial Activity due to Iron Doping of Tricalcium Phosphate Bone Cements”, *Materials Science and Engineering C: Materials for Biological Applications* 94, 798 – 810 (2019).
- Eva Amenta, Helen E. King, Holger Petermann, **Vuk Uskoković**, Steven M. Tommasini, Carolyn M. Macica – “Vibrational Spectroscopic Analysis of Hydroxyapatite in HYP Mice and Individuals with XLH”, *Therapeutic Advances in Chronic Disease* 9 (12) 268 – 281 (2018).
- Vuk Uskoković**, Smilja Marković, Ljiljana Veselinović, Srečo Škapin, Nenad Ignjatović, Dragan P. Uskoković – “Insights into the Kinetics of Thermally Induced Crystallization of Amorphous Calcium Phosphate”, *Physical Chemistry Chemical Physics* 20, 29221 – 29235 (2018).
- Nenad L. Ignjatović, Marija Sakač, Ivana Kuzminac, Vesna Kojić, Smilja Marković, Dana Vasiljević-Radović, Victoria M. Wu, **Vuk Uskoković**, Dragan P. Uskoković – “Chitosan Oligosaccharide Lactate Coated

Hydroxyapatite Nanoparticles as a Vehicle for the Delivery of Steroid Drugs and the Targeting of Breast Cancer Cells”, *Journal of Materials Chemistry B: Materials for Biology and Medicine* 6, 6957 – 6968 (2018).

Victoria M. Wu, Sean Tang, **Vuk Uskoković** – “Calcium Phosphate Nanoparticles as Intrinsic Inorganic Antimicrobials: The Antibacterial Effect”, *ACS Applied Materials and Interfaces* 10 (40) 34013 – 34028 (2018).

**Vuk Uskoković**, Sean Tang, Victoria M. Wu – “On Grounds of the Memory Effect in Amorphous and Crystalline Apatite: Kinetics of Crystallization and Biological Response”, *ACS Applied Materials and Interfaces* 10 (17) 14491 – 14508 (2018).

Sebastian P. Pernal, Victoria M. Wu, **Vuk Uskoković** – “Hydroxyapatite as a Vehicle for the Selective Effect of Superparamagnetic Iron Oxide Nanoparticles against Human Glioblastoma Cells”, *ACS Applied Materials and Interfaces* 9 (45) 39283 – 39302 (2017).

Victoria M. Wu, **Vuk Uskoković** – “Calcium Phosphate Nanoparticles in *Drosophila melanogaster*: The Effects of Phase Composition, Crystallinity and the Pathway of Formation”, *ACS Biomaterials Science and Engineering* 3 (10) 2348 – 2357 (2017).

**Vuk Uskoković**, Julietta V. Rau – “Nonlinear Oscillatory Dynamics of the Hardening of Calcium Phosphate Cements”, *RSC Advances* 7, 40517 – 40532 (2017).

Victoria M. Wu, Jarrett Mickens, **Vuk Uskoković** – “Bisphosphonate-Functionalized Calcium Phosphate Nanoparticles for the Delivery of the Bromodomain Inhibitor JQ1 in the Treatment of Osteosarcoma”, *ACS Applied Materials and Interfaces* 9 (31) 25887 – 25904 (2017).

**Vuk Uskoković**, Shreya Ghosh, Victoria M. Wu – “Antimicrobial Hydroxyapatite-Gelatin-Silica Composite Pastes with Tunable Setting Properties”, *Journal of Materials Chemistry B: Materials for Biology and Medicine* 5, 6065 – 6080 (2017).

Julietta V. Rau, Victoria M. Wu, Valerio Graziani, Inna V. Fadeeva, Alexander S. Fomin, Marco Fosca, **Vuk Uskoković** – “The Bone Building Blues: Self-Hardening Copper-Doped Calcium Phosphate Cement and Its *in vitro* Assessment against Mammalian Cells and Bacteria”, *Materials Science and Engineering C: Materials for Biological Applications* 79 (1) 270 – 279 (2017).

**Vuk Uskoković**, Maheshwar Adiraj Iyer, Victoria M. Wu – “One Ion to Rule Them All: Combined Antibacterial, Osteoinductive and Anticancer Properties of Selenite-Incorporated Hydroxyapatite”, *Journal of Materials Chemistry B: Materials for Biology and Medicine* 2017, 5, 1430 – 1445 (2017).

**Vuk Uskoković**, Sebastian Pernal, Victoria M. Wu – “Earthicle: The Design of a Conceptually New Type of Particle”, *ACS Applied Materials and Interfaces* 9 (2) 1305 – 1321 (2017).

Nenad L. Ignjatović, Katarina M. Penov-Gaši, Victoria M. Wu, Jovana J. Ajduković, Vesna V. Kojić, Dana Vasiljević-Radović, Maja Kuzmanović, **Vuk Uskoković**, Dragan P. Uskoković – “Selective Anticancer Activity of Lung-Targeting Hydroxyapatite/Chitosan-Poly(D,L)-Lactide-co-Glycolide Particles Loaded with an Androstane-Based Cancer Inhibitor”, *Colloids and Surfaces B: Biointerfaces* 148, 629 – 639 (2016).

- Victoria M. Wu, **Vuk Uskoković** – “Is There a Relationship between Solubility and Resorbability of Different Calcium Phosphate Phases *in vitro*?”, *Biochimica et Biophysica Acta – General Subjects* 1860 (10) 2157 – 2168 (2016).
- Zoran Stojanović, Nenad Ignjatović, Victoria Wu, Vojka Žunić, Srečo Škapin, Ljiljana Veselinović, Miroslav Miljković, **Vuk Uskoković**, Dragan Uskoković – “Hydrothermally Processed 1D Hydroxyapatite: Mechanism of Formation and Biocompatibility Studies”, *Materials Science and Engineering C: Materials for Biological Applications* 68, 746 – 757 (2016).
- Shreya Ghosh, Victoria M. Wu, Sebastian Pernal, **Vuk Uskoković** – “Self-Setting Calcium Phosphate Cements with Tunable Antibiotic Release Rates for Advanced Bone Graft Applications”, *ACS Applied Materials and Interfaces* 8 (12) 7691 - 7708 (2016).
- Mohammed A. Khan, Victoria M. Wu, Shreya Ghosh, **Vuk Uskoković** – “Gene Delivery Using Calcium Phosphate Nanoparticles: Optimization of the Transfection Process and the Effects of Citrate and Poly(L-Lysine) as Additives”, *Journal of Colloid and Interface Science* 471, 48 – 58 (2016).
- Nenad Ignjatović, Victoria Wu, Zorica Ajduković, Tatjana Mihajilov-Krstev, **Vuk Uskoković**, Dragan Uskoković – “Chitosan-PLGA Polymer Blends as Coatings for Hydroxyapatite Nanoparticles and Their Effect on Antimicrobial Properties, Osteoconductivity and Regeneration of Osseous Tissues”, *Materials Science and Engineering C: Materials for Biological Applications* 60, 357 – 364 (2016).
- Vuk Uskoković**, Tejal A. Desai – “Does Translational Symmetry Matter on the Micro Scale? Fibroblastic and Osteoblastic Interactions with the Topographically Distinct Poly( $\epsilon$ -Caprolactone)/Hydroxyapatite Thin Films”, *ACS Applied Materials and Interfaces* 6 (15) 13209 - 13220 (2014).
- Vuk Uskoković**, Tejal A. Desai – “*In vitro* Analysis of Nanoparticulate Hydroxyapatite/Chitosan Composites as Potential Drug Delivery Platforms for the Sustained Release of Antibiotics in the Treatment of Osteomyelitis”, *Journal of Pharmaceutical Sciences* 103 (2) 567 – 579 (2014).
- Vuk Uskoković**, Tejal A. Desai – “Simultaneous Bactericidal and Osteogenic Effect of Nanoparticulate Calcium Phosphate Powders Loaded with Clindamycin on Osteoblasts Infected with *Staphylococcus Aureus*”, *Materials Science and Engineering C: Materials for Biological Applications* 37, 210 – 222 (2014).
- Magdalena Stevanović, **Vuk Uskoković**, Miloš Filipović, Srečo D. Škapin, Dragan P. Uskoković – “Composite PLGA/AgNpPGA/AscH Nanospheres with Combined Osteoinductive, Antioxidative and Antimicrobial Activities”, *ACS Applied Materials and Interfaces* 5 (18) 9034 – 9042 (2013).
- Vuk Uskoković**, Charles Hoover, Marija Vukomanović, Dragan P. Uskoković, Tejal A. Desai – “Osteogenic and Antimicrobial Nanoparticulate Calcium Phosphate and/or Poly-Lactide-Co-Glycolide Powders for the Treatment of Osteomyelitis”, *Materials Science and Engineering C: Materials for Biological Applications* 33 (6) 3362 – 3373 (2013).
- Vuk Uskoković**, Samir Shariff Batarni, Julien Schweicher, Andrew King, Tejal A. Desai – “Effect of Calcium Phosphate Particle Shape and Size on their Antibacterial and Osteogenic Activity in the Delivery of Antibiotics *in vitro*”, *ACS Applied Materials and Interfaces* 5 (7) 2422 – 2431 (2013).

- Vuk Uskoković**, Tejal A. Desai – “Phase Composition Control of Calcium Phosphate Nanoparticles for Tunable Drug Delivery Kinetics and Treatment of Osteomyelitis. II. Antibacterial and Osteoblastic Response”, *Journal of Biomedical Materials Research Part A* 101 (5) 1427 – 1436 (2013).
- Vuk Uskoković**, Tejal A. Desai – “Phase Composition Control of Calcium Phosphate Nanoparticles for Tunable Drug Delivery Kinetics and Treatment of Osteomyelitis. I. Preparation and Drug Release”, *Journal of Biomedical Materials Research Part A* 101 (5) 1416 – 1426 (2013).
- Nenad Ignjatović, Zorica Ajduković, Vojin Savić, Stevo Najman, Dragan Mihailović, Perica Vasiljević, Zoran Stojanović, **Vuk Uskoković**, Dragan Uskoković – “Nanoparticles of Cobalt-Substituted Hydroxyapatite in Regeneration of Mandibular Osteoporotic Bones”, *Journal of Materials Science: Materials in Medicine* 24 (2) 343 – 354 (2013).
- Nenad Ignjatović, **Vuk Uskoković**, Zorica Ajduković, Dragan Uskoković – “Multifunctional Hydroxyapatite and Poly(D,L-Lactide-co-Glycolide) Nanoparticles for the Local Delivery of Cholecalciferol”, *Materials Science and Engineering C: Materials for Biological Applications* 33 (2) 943 – 950 (2013).
- Vuk Uskoković**, Kunwoo Lee, Phin Peng Lee, Kathleen E. Fischer, Tejal A. Desai – “Shape Effect in the Design of Nanowire-Coated Microparticles as Epithelial Drug Delivery Devices”, *ACS Nano* 6 (9) 7832 – 7841 (2012).
- Vuk Uskoković**, Phin Peng Lee, Laura Walsh, Kathleen E. Fischer, Tejal A. Desai – “Silicon Nanowire Coated Microparticles as Epithelial Drug Delivery Devices. The Effect of PEGylation on Particle-Epithelium Interactions”, *Biomaterials* 33 (5) 1663-1672 (2012).
- Magdalena Stevanović, Igor Savanović, **Vuk Uskoković**, Srečo D. Škapin, Ines Bračko, Uroš Jovanović, Dragan Uskoković – “A New, Simple, Green and One-Pot Four-Component Synthesis of Bare and Poly( $\alpha$ ,  $\gamma$ , L-Glutamic Acid) Capped Silver Nanoparticles”, *Colloid and Polymer Science* 290 (3) 221 – 231 (2011).
- Vuk Uskoković**, Feroz Khan, Haichuan Liu, Halina Ewa Witkowska, Li Zhu, Wu Li, Stefan Habelitz – “Proteolytic Hydrolysis of Amelogenin by means of Matrix Metalloprotease-20 Accelerates Mineralization *in vitro*”, *Archives of Oral Biology* 56 (12) 1548 – 1559 (2011).
- Vuk Uskoković**, Wu Li, Stefan Habelitz – “Biomimetic Precipitation of Uniaxially Grown Calcium Phosphate Crystals from Full-Length Human Amelogenin Sols“, *Journal of Bionic Engineering* 8 (2) 114 – 121 (2011).
- Vuk Uskoković**, Roselyn Odsinada, Sonia Djordjevic, Stefan Habelitz – “Dynamic Light Scattering and Zeta Potential of Colloidal Mixtures of Amelogenin and Hydroxyapatite in Calcium and Phosphate Rich Ionic Milieus”, *Archives of Oral Biology* 56, 521 – 532 (2011).
- Li Zhu\*, **Vuk Uskoković**\*, Thuan Le, Pamela DenBesten, Yu Lei Huang, Stefan Habelitz, Wu Li – “Altered Self-Assembly and Apatite Binding of Amelogenin Induced by N-terminal Proline Mutation”, *Archives of Oral Biology* 56 (4) 331 - 336 (2011). \*Note: the first two authors are designated as equally contributing ones.
- Vuk Uskoković**, Wu Li, Stefan Habelitz – “Amelogenin as a Promoter of Nucleation and Crystal Growth of Apatite”, *Journal of Crystal Growth* 316, 106 – 117 (2011).

- Marija Vukomanović, Srečo Škapin, Boštjan Jančar, Tatjana Maksin, Nenad Ignjatović, **Vuk Uskoković**, Dragan Uskoković – “Poly(D,L-Lactide-Co-Glycolide)/Hydroxyapatite Core-Shell Nanospheres. Part 1: A Multifunctional System for Controlled Drug Delivery”, *Colloids and Surfaces B: Biointerfaces* 82 (2) 404 – 413 (2011).
- Vuk Uskoković**, Zachery Castiglione, Pamela Cubas, Li Zhu, Wu Li, Stefan Habelitz – “Zeta-Potential and Particle Size Analysis of Recombinant Human Amelogenins”, *Journal of Dental Research* 89 (2) 149 – 153 (2010).
- Vuk Uskoković**, Min-Kyeong Kim, Wu Li, Stefan Habelitz – “Enzymatic Processing of Amelogenin during Continuous Crystallization of Apatite”, *Journal of Materials Research* 32, 3184 – 3195 (2008).
- Vuk Uskoković** – “Surface Charge Effects Involved in the Control of Stability of Sols Comprising Uniform Cholesterol Particles”, *Materials and Manufacturing Processes* 23 (6) 620 – 623 (2008).
- Vuk Uskoković** – “Insights into Morphological Nature of Precipitation of Cholesterol”, *Steroids* 73, 356 – 369 (2008).
- Vuk Uskoković** – “Composites Comprising Cholesterol and Carboxymethyl Cellulose”, *Colloids and Surfaces B: Biointerfaces* 61, 250 – 261 (2008).
- Vuk Uskoković** – “Morphological Study of Emulsion-Assisted Cholesterol Precipitation Processes”, *Molecular Crystals and Liquid Crystals* 474, 77 – 88 (2007).
- Vuk Uskoković**, Egon Matijević – “Uniform Particles of Pure and Silica Coated Cholesterol”, *Journal of Colloid and Interface Science* 315 (2) 500 – 511 (2007).
- Vuk Uskoković**, Miha Drogenik – “Four Novel Co-Precipitation Procedures for the Synthesis of Lanthanum-Strontium Manganites”, *Materials and Design* 28 (2) 667 – 672 (2007).
- Vuk Uskoković**, Aljoša Košak, Miha Drogenik – “Preparation of Silica-Coated Lanthanum-Strontium Manganite Particles with Designable Curie Point, for Application in Hyperthermia Treatments”, *International Journal of Applied Ceramic Technology* 3 (2) 134 – 143 (2006).
- Vuk Uskoković**, Aljoša Košak, Miha Drogenik – “Silica-Coated Lanthanum-Strontium Manganites for Hyperthermia Treatments”, *Materials Letters* 60 (21-22) 2620 – 2622 (2006).
- Vuk Uskoković**, Miha Drogenik – “Mechanism of a Solid-State Formation of  $\text{La}_{1-x}\text{Sr}_x\text{MnO}_{3+\delta}$  ( $0 < x < 0.5$ ) and Magnetic Characterization Thereof”, *Materials Science Forum* 518, 119 – 124 (2006).
- Vuk Uskoković**, Miha Drogenik – “Synthesis of Lanthanum-Strontium Manganites by Oxalate-Precursor Co-Precipitation Methods in Solution and in Reverse Micellar Microemulsion”, *Journal of Magnetism and Magnetic Materials* 303 (1) 214 – 220 (2006).
- Vuk Uskoković**, Miha Drogenik – “Synthesis of Relatively Highly Magnetic Nano-Sized NiZn-Ferrite in Microemulsion at 45 °C”, *Surface Review and Letters* 12 (1) 97 - 100 (2005).

- Vuk Uskoković**, Darko Makovec, Miha Drofenik – “Synthesis of Lanthanum-Strontium Manganites by a Hydroxide-Precursor Co-Precipitation Method in Solution and Reverse Micellar Microemulsion”, *Materials Science Forum* 494, 155 – 160 (2005).
- Vuk Uskoković**, Miha Drofenik – “A Mechanism for the Formation of Nanostructured NiZn Ferrites via a Microemulsion-Assisted Precipitation Method”, *Colloids and Surfaces A: Physicochemical and Engineering Aspects* 266, 168 – 174 (2005).
- Vuk Uskoković**, Miha Drofenik, Irena Ban – “The Characterization of Nanosized Nickel-Zinc Ferrites Synthesized within Reverse Micelles of CTAB/1-Hexanol/Water Microemulsion”, *Journal of Magnetism and Magnetic Materials* 284, 294 – 302 (2004).
- Vuk Uskoković**, Miha Drofenik – “Synthesis of Nanocrystalline Nickel-Zinc Ferrites via a Microemulsion Route”, *Materials Science Forum* 453 – 4, 225 – 230 (2004).
- Vuk Uskoković**, Miha Drofenik – “Synthesis of Nanocrystalline Nickel-Zinc Ferrites within Reverse Micelles”, *Materials and Technology* 37 (3-4) 129 – 131 (2003).
- Vuk Uskoković**, Nenad Ignjatović, Nadežda Petranović – “Synthesis and Characterization of Hydroxyapatite-Collagen Biocomposite Materials”, *Materials Science Forum* 413, 269 – 274 (2003).

## **Critical Reviews, Philosophical, Educational and Social Science Articles:**

**Note:** Names of Dr. Uskoković's mentees are italicized.

- Victoria M. Wu*, **Vuk Uskoković** – “Waiting for Απαταω: 250 Years Later”, *Foundations of Science* (in press, 2019).
- Vuk Uskoković** – “Celeste's Plight: What Can Film Teach Natural Science?”, *Film International* 17 (1) 69 – 88 (2019).
- Vuk Uskoković** – “Revisiting the Relevance of Conceptualism of Godard's Film”, *Journal for Religion, Film and Media* 4 (2) 83 – 113 (2018).
- Vuk Uskoković**, *Victoria M. Wu* – “Astromimetics: The Dawn of a New Era for (Bio)Materials Science?”, *Nanobiomedicine* 5, 1 - 5 (2018).
- Vuk Uskoković** – “Flipping the Flipped: The Co-Creational Classroom“, *Research and Practice in Technology Enhanced Learning* 13:11 (2018).
- Vuk Uskoković** – “Rethinking Active Learning as the Paradigm of Our Times: Towards Poetization of Education in the Age of STEM”, *Journal of Materials Education* 39 (5-6) 241 – 258 (2017).
- Vuk Uskoković**, *Shreya Ghosh* – “Carriers for the Tunable Release of Therapeutics: Etymological Classification and Examples”, *Expert Opinion on Drug Delivery* 13 (12) 1729 – 1741 (2016).
- Vuk Uskoković**, *Victoria M. Wu* – “Calcium Phosphate as a Key Material for Socially Responsible Tissue Engineering”, *Materials* 9, 434 – 460 (2016).



- Vuk Uskoković** – “Punk Philosophy as a Path to the Summit of Ethos”, *Cultura: International Journal of Philosophy of Culture and Axiology* 13 (1) 29 – 47 (2016).
- Vuk Uskoković** – “When  $1 + 1 > 2$ : Nanostructured Composite Materials for Hard Tissue Engineering Applications”, *Materials Science and Engineering C: Materials for Biological Applications* 57, 434 – 451 (2015).
- Vuk Uskoković** – “The Odyssey of Co-Creation: Sailing between Scylla of Solipsism and Charybdis of Objectivism”, *Biocosmology – Neo-Aristotelism* 5 (2) 226 – 239 (2015).
- Vuk Uskoković** – “The Role of Hydroxyl Channel in Defining Selected Physicochemical Peculiarities Exhibited by Hydroxyapatite”, *RSC Advances* 5, 36614 - 36633 (2015).
- Vuk Uskoković** – “Nanostructured Platforms for the Sustained and Local Delivery of Antibiotics in the Treatment of Osteomyelitis”, *Critical Reviews in Therapeutic Drug Carrier Systems* 32 (1) 1 – 59 (2015).
- Vuk Uskoković, Tejal A. Desai** – “Nanoparticulate Drug Delivery Platforms for Advancing Bone Infection Therapies”, *Expert Opinion on Drug Delivery* 11 (12) 1899 - 1912 (2014).
- Vuk Uskoković** – “Chemical Reactions as *Petite Rendezvous*: The Use of Metaphor in Materials Science Education”, *Journal of Materials Education* 36 (1-2) 25 – 50 (2014).
- Vuk Uskoković** – “Nanoscience: Whence it entered our world”, *Tehnika – Novi Materijali* 22 (5) 795 – 803 (2013).
- Vuk Uskoković** – “Revisiting the Fundamentals in the Design and Control of Nanoparticulate Colloids in the Frame of Soft Chemistry”, *Review Journal of Chemistry* 3 (4) 271 – 303 (2013).
- Vuk Uskoković** – “Entering the Era of Nanoscience: Time to Be So Small”, *Journal of Biomedical Nanotechnology* 9, 1441 – 1470 (2013).
- Vuk Uskoković, Tejal A. Desai** – “Calcium Phosphate Nanoparticles: A Future Therapeutic Platform for the Treatment of Osteomyelitis?”, *Therapeutic Delivery* 4 (6) 643 - 645 (2013).
- Vuk Uskoković** – “On Love in the Realm of Science”, *Technoetic Arts: A Journal of Speculative Research* 10 (2-3) 359 – 374 (2012).
- Vuk Uskoković** – “Dynamic Light Scattering and Microelectrophoresis: Main Prospects and Limitations“, *Journal of Dispersion Science and Technology* 33 (12) 1762 – 1786 (2012).
- Vuk Uskoković** – “On Holism and the Contextual Character of Natural Qualities”, *World Futures: The Journal of Global Education* 68 (6) 406 – 429 (2012).
- Vuk Uskoković** – “Ten Commandments for Writing a Meritable Scientific Paper”, *Journal of Postdoctoral Affairs* 2 (1) 2 – 7 (2012).
- Vuk Uskoković** – “Turning the Paradigm Upside Down: Postdocs as Principal Investigators’ Mentors”, *Journal of Postdoctoral Affairs* 1 (2) 5 – 18 (2011).

- Vuk Uskoković**, Dragan P. Uskoković – “Extrapolating Strategies for the Scientific and Technological Development of Underdeveloped Societies from the Examples of South Korea, Slovenia and Serbia”, *International Journal of Technology Management and Sustainable Development* 10 (2) 125 – 145 (2011).
- Vuk Uskoković** – “Co-Creation of Experiential Qualities”, *Pragmatics & Cognition* 19 (3) 562 – 589 (2011).
- Vuk Uskoković** – “The Role of Postdoctoral Scholars Associations in the Times of Unionization”, *Journal of Postdoctoral Affairs* 1 (1) 34 – 49 (2011).
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## **Acknowledgments:**

Kimberly R. Kam, Laura A. Walsh, Suzanne M. Bock, Michael Koval, Kathleen E. Fischer, Russell F. Ross, Tejal A. Desai – „Nanostructure-Mediated Transport of Biologics across Epithelial Tissue: Enhancing Permeability via Nanotopography“, *Nano Letters* 13, 164 – 171 (2013). **Note: acknowledged for “valuable insight and advice”**

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Anton P. Železnikar – “On the Way to Information 1”, Artificio, Ljubljana (2006). **Note: acknowledged for “impacting the author’s attitude and strengthening some of his concepts”**

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## **Presentations:**

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\*All conference presentations listed below are associated with proceedings as separate bibliographic units not listed in this CV.

## **Invited and Plenary Talks:**

*Calcium Phosphate Nanoparticles for the Treatment of Infectious and Chronic Disease*, Invited Lecture, School of Engineering, San Diego State University, San Diego, CA, November 12, 2019.

*Earthicle and Its Discontents*, Plenary Lecture, 21th YUCOMAT Conference of Materials Research Society - Serbia, Herceg-Novi, Montenegro, September 3, 2019.

*Understanding Nanotechnologies: Time to Be So Small*, Invited Lecture, Sci | Art Lab + Studio Summer Institute, University of California, Los Angeles, July 30, 2019.

*Making a Full Circle: Advancements in Bone Grafts Based on Pure Calcium Phosphates*, Invited Lecture, 2<sup>nd</sup> Global Forum on Advanced Materials and Technologies for Sustainable Development (GFMAT-2) and 4th International Conference on Innovations in Biomaterials, Biomanufacturing, and Biotechnologies (Bio-4) (GFMAT-2 / BIO-4), American Ceramic Society, Toronto, ON, July 25, 2019.

*Nanomedicine for the Treatment of Infectious and Chronic Disease: From Bone to Brain*, Invited Lecture, Department of Materials Science and Engineering & Institute for Biomaterials and Biomedical Engineering, University of Toronto, Toronto, ON, July 24, 2019.

*Nanomedicine for the Treatment of Infectious and Chronic Disease*, Center for Minimally Invasive Therapeutics, California NanoSystems Institute, University of California at Los Angeles, Los Angeles, CA, April 30, 2019.

*Ceramic Nanoparticles for Advanced Biomedical Applications: From Bone to Brain*, Bioengineering Department Seminar, Bourns College of Engineering, University of California at Riverside, Riverside, CA, April 10, 2019.

*Ceramic Nanoparticles for Advanced Biomedical Applications: From Bone to Brain*, Plenary Lecture, 20th YUCOMAT Conference of Materials Research Society - Serbia, Herceg-Novi, Montenegro, September 4, 2018.

- Ceramic Nanoparticles for Advanced Biomedical Applications: From Bone to Brain***, Invited Lecture, Department of Chemical Engineering, Northeastern University, Boston, MA, May 24, 2018.
- Nanoparticles for Advanced Biomedical Applications: From Bone to Brain***, Invited Lecture, Department of Biomedical Engineering, Columbia University, New York, NY, May 22, 2018.
- Calcium Phosphate: A David among Goliaths in the Realm of Materials for Tissue Engineering and Drug Delivery***, Invited Presentation, Department of Biomaterials, College of Dentistry, New York University, New York, NY, May 21, 2018.
- Rebirth of Bone Mineral in Biomedicine: From an Antibiotic Alternative to Targeted Anticancer Therapies***, Keynote Lecture, TechConnect World Innovation Conference & Expo, Anaheim, CA, May 16, 2018.
- Revisiting the Potential of Calcium Phosphate Nanoparticles: From Cell Reprogramming to Targeted Anticancer Therapies***, Lecture, Department of Biomedical and Pharmaceutical Sciences, University of Montana, Missoula, May 14, 2018.
- Ceramic Nanoparticles for Advanced Biomedical Applications: From Bone to Brain***, Invited Lecture, Department of Chemistry, University of California at Santa Cruz, Santa Cruz, CA, May 11, 2018.
- The Forthcoming Renaissance for Calcium Phosphate Nanoparticles in Biomedicine***, Invited Lecture, Oregon Health & Science University, Portland, OR, May 9, 2018.
- The Forthcoming Renaissance for Calcium Phosphate Nanoparticles in Biomedicine***, Keynote Lecture, NanoWorld Conference, San Francisco, CA, April 25, 2018.
- Nanoparticulate Calcium Phosphate: A David among Goliaths in the Realm of Biomedical Materials***, Invited Lecture, Departments of Chemical Engineering and Biotechnology and Food Engineering, Technion – Israel Institute of Technology, Haifa, Israel, April 11, 2018. **Note: cancelled because of the inability to travel; PPTs distributed to to-be-attendees.**
- The Approaching Renaissance for Calcium Phosphate Nanoparticles in Biomedicine***, Materials Science and Engineering Department Seminar, Bourns College of Engineering, University of California at Riverside, Riverside, CA, November 8, 2017.
- Calcium Phosphate as a Key Material for Socially Responsible Tissue Engineering***, Plenary Lecture, 19th YUCOMAT Conference of Materials Research Society - Serbia, Herceg-Novi, Montenegro, September 6, 2017.
- From Controlled Drug Delivery to Gene Therapies to Bone Regeneration: Calcium Phosphate Nanoparticles as Essential Components of Advanced Biomaterials***, Plenary Lecture, Frontiers in Pharmaceutical and Biomedical Sciences Conference, Irvine, CA, November 17, 2016.
- Calcium Phosphate: A Humane Material for the Biomedical Technologies of the Future***, Faculty of Physical Chemistry, University of Belgrade, Belgrade, Serbia, October 21, 2016.



- Calcium Phosphate: A David among Goliaths in the Realm of Materials for the Regeneration of Bone***, Invited Lecture, Department of Chemistry, Sapienza University of Rome, Rome, Italy, October 18, 2016.
- From Controlled Drug Delivery to Gene Therapies to Bone Regeneration: Calcium Phosphate Nanoparticles as Essential Components of Advanced Biomaterials***, Plenary Lecture, 18th YUCOMAT Conference of Materials Research Society - Serbia, Herceg-Novi, Montenegro, September 9, 2016.
- Trends in the Science and Technology of Nanoscale Materials and their Biomedical Applications***, Chemistry Summer School Seminar, Petnica Research Center, Petnica, Serbia, June 16, 2016.
- Calcium Phosphate: The Protagonist in the Tale of a Minimalistic Magic***, Chemistry Summer School Seminar, Petnica Research Center, Petnica, Serbia, June 16, 2016.
- From Controlled Drug Delivery to Gene Therapies to Bone Regeneration: Calcium Phosphate Nanoparticles as Essential Components of Advanced Biomaterials***, Keynote Lecture, TechConnect World Innovation Conference & Expo, Washington, DC, May 23, 2016.
- Diverse Therapeutic Potential of Calcium Phosphate Nanoparticles: A Story about Simplicity in the Times of Overwhelming Complexities***, Department of Biomedical and Pharmaceutical Sciences, Chapman University School of Pharmacy, Irvine, CA, April 12, 2016.
- The Role of Recombinant Proteins in Therapeutic Strategies***, Department of Biomedical and Pharmaceutical Sciences, Chapman University School of Pharmacy, Irvine, CA, April 12, 2016.
- Deficiencies and Potentialities of Calcium Phosphate Nanoparticles as Components of Advanced Biomaterials***, Keynote Lecture, ISN2A - International Symposium on Nanoparticles/Nanomaterials and Applications, Costa de Caparica, Portugal, January 18 – 21, 2016.
- Nanobiotechnology: A Discipline at a Crossroads***, 30-Hour Global Initiative for Academic Networks Winter Term Course, Indian Institute of Technology at Kharagpur, Kharagpur, India, December 14 – 28, 2015.  
Note: all lectures available via YouTube.
- Calcium Phosphate: A David among Goliaths in the Realm of Materials for Regeneration of Osseous Tissues***, Department of Chemical Engineering and Materials Science, University of California at Irvine, Irvine, CA, October 30, 2015.
- Calcium Phosphate: A David among Goliaths in the Realm of Materials for Regeneration of Hard Tissues***, Texas A&M University, Baylor School of Dentistry, Dallas, TX, September 24, 2015.
- Nanoparticles and Intelligent Materials for Regenerative Medicine, Keynote Lecture***, 7<sup>th</sup> World Congress on Preventive and Regenerative Medicine, Chientan Youth Activity Center, Taipei, Taiwan, November 5, 2014.
- Similia similibus curantur: Bone-Mimicking Composites as the New Generation of Bone Replacement Materials***, Department of Bioengineering, Pennsylvania State University, State College, PA, October 15, 2014.

- Similia similibus curantur: Bone-Mimicking Composites as the New Generation of Bone Replacement Materials***, 16th YUCOMAT Conference of Materials Research Society - Serbia, Herceg-Novi, Montenegro, September 2014.
- A Window into a Career in Bioengineering***, Bioengineering Organizational Alliance, University of Illinois, Chicago, February 27, 2014.
- Nanobiotechnologies for the Medicine of the Future***, Department of Nanomedicine, Methodist Research Institute, Houston, TX, August 13, 2013.  
Note: Video available at <http://methodist.hendrik.mvp.com/Media/VideoPlayer/461>
- A Way through the Web of Science***, Department of Bioengineering, Schools of Medicine and Engineering, University of Illinois, Chicago, IL, July 12, 2013.
- My Way through the Web of Science***, Department of Biomedical Engineering, Graduate Education & Applied Research Center, University of South Dakota, Sioux Falls, SD, April 16, 2013.
- Elementary Aspects of the Nanoparticle Design***, Department of Chemistry, University of South Florida, Tampa, FL, February 4, 2013.
- Key Concepts in the Design of Functional Nanoparticles***, 11<sup>th</sup> Conference of Young Researchers, University of Belgrade, Belgrade, Serbia, December 3, 2012.
- Interplanetary Scientific Hopping: Wholehearted Benefits of Interdisciplinary Curiosity***, Department of Pharmaceutical Sciences, Eugene Applebaum College of Pharmacy and Health Sciences, Wayne State University, Detroit, MI, September 27, 2012.
- Contemporary Trends in Nanosciences***, Faculty of Technology and Metallurgy, University of Belgrade, Belgrade, Serbia, May 22, 2012.
- Nanomaterials and Nanotechnologies: Time to be small***, NIH-funded Bridges to the Baccalaureate Program for the minority students of the City College of San Francisco, Skyline College and San Francisco State University, April 17, 2012, Science Hall, City College of San Francisco, San Francisco, CA.
- Nanotechnology in Dental Science: Biomimicry of Morphogenesis of the Tooth Enamel***, Distinguished Scientist Lecture Series, College of Dentistry, University of Florida, Gainesville, FL, December 8, 2011.
- There's Treasure Everywhere: Mimicking the Genesis of Tooth Enamel***, 12th YUCOMAT Conference of Materials Research Society - Serbia, Herceg-Novi, Montenegro, September 2010.
- Interaction of Amelogenin and Hydroxyapatite Nanoparticles Relevant for In-vitro Synthesis of Dental Enamel***, Invited Presentation, National Center for Electron Microscopy, Lawrence Berkeley National Laboratory, June 11, 2009.
- Nanomaterials and Nanotechnologies: Time to be small***, Institute for Advanced Studies – IMDEA, Autonomous University of Madrid, Madrid, Spain, May 2008.
- Nanomaterials and Nanotechnologies: Time to be so small***, Institute of General Physics, University of Technology, Vienna, Austria, October 2007.

*Preparation and Multilayered Aggregation of Uniform Colloidal Cholesterol Particles*, Faculty of Physical Chemistry, University of Belgrade, Belgrade, Serbia, June 2007.

*Preparation and Multilayered Aggregation of Uniform Colloidal Cholesterol Particles*, Jožef Stefan Institute, Ljubljana, Slovenia, May 2007.

*Preparation and Multilayered Aggregation of Uniform Colloidal Cholesterol Particles*, Condensed Matter Physics & Materials Science Seminar, Brookhaven National Laboratory, Upton, NY, USA, May 2007.

## **Conference Lectures:**

*Forthcoming Renaissance for Calcium Phosphates in Biomedicine*, 255th American Chemical Society National Meeting, Division for Colloid and Surface Chemistry, New Orleans, LA, March 18-22, 2018.

*Earthicle: A Conceptually New Type of Composite Nanoparticle*, Advances in Functional Materials Conference, University of California Los Angeles, Los Angeles, CA, August 16, 2017.

*The Approaching Renaissance for Calcium Phosphates in Biomedicine*, Institute for Biomedical Engineering Annual Conference, Salt Lake City, UT, April 1, 2017.

*Super firmum fundamentum: The Approaching Renaissance for Calcium Phosphates in Biomedicine*, Biomaterials for Healthcare Conference (BioMaH) - Biomaterials for Tissue and Genetic Engineering and Role of Nanotechnology, Consiglio Nazionale delle Ricerche, Rome, Italy, October 17, 2016.

*From Controlled Drug Delivery to Gene Therapies to Bone Regeneration: Calcium Phosphate Nanoparticles as Essential Components of Advanced Biomaterials*, From Solid State to Biophysics VIII: From Basic to Life Sciences Conference, Cavtat, Croatia, June 9, 2016.

*Nanoparticulate Platforms for the Sustained and Tunable Release of Antibiotics in the Treatment of Osteomyelitis*, 7<sup>th</sup> World Congress on Preventive and Regenerative Medicine, Chientan Youth Activity Center, Taipei, Taiwan, November 7, 2014.

*Nanoparticulate Hydroxyapatite/Chitosan Composites as Potential Drug Delivery Platforms for the Sustained Release of Antibiotics in the Treatment of Osteomyelitis*, Materials Research Society Spring Meeting, San Francisco, CA, April 2014.

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*Chemical Reactions as Petite Rendezvous: the Use of Metaphor in Materials Science Education*, Materials Research Society Spring Meeting, San Francisco, CA, April 2014.

*Osteogenic Calcium Phosphate Nanoparticles with Designable Drug Release Kinetics*, Research and Clinical Excellence Day, University of California, San Francisco, CA, October 2013.

*Fibroblastic and Osteoblastic Interactions with the Topographically Distinct Poly( $\epsilon$ -caprolactone)/Hydroxyapatite Thin Films*, 15th YUCOMAT Conference of Materials Research Society - Serbia, Herceg-Novi, Montenegro, September 2013.

***The Peer Review System: Downfalls and Ideas on How to Revive It***, American Chemical Society Summer School, Washington, DC, July 2013.

***Calcium Phosphate Nanoparticles with Tunable Drug Release Kinetics for the Advanced Treatment of Bone Infection***, 14th YUCOMAT Conference of Materials Research Society - Serbia, Herceg-Novi, Montenegro, September 2012.

***Calcium Phosphate Nanoparticles with Controllable Drug Release Kinetics for the Treatment of Osteomyelitis***, European Materials Research Society meeting, Strasbourg, France, May 16, 2012.

***Silicon-Nanowire-Coated Silica Beads as Adhesive Drug Delivery Vehicles***, 13th YUCOMAT Conference of Materials Research Society - Serbia, Herceg-Novi, Montenegro, September 2011.

***Confessions of a Tooth Enamel Grower***, UCSF Mission Bay Research in Progress Lecture Series, April 2010.

***Imitating the Growth of Tooth Enamel***, 11th YUCOMAT Conference of Materials Research Society - Serbia, Herceg-Novi, Montenegro, August/September 2009.

***Enamel Matrix Guided Growth of Apatite***, Materials Research Society Spring Meeting, San Francisco, CA, April 2009.

***Mimicking Biological Mineralization of Dental Enamel by Means of a Constant Crystallization Approach***, Research and Clinical Excellence Day, University of California, San Francisco, CA, October 2008.

***Blending Nanoscience and Bioscience: Biomimicry of the Mineralization of Enamel***, 10th YUCOMAT Conference of Materials Research Society - Serbia, Herceg-Novi, Montenegro, September 2008.

***Preparation and Multilayered Aggregation of Uniform Colloidal Cholesterol Particles***, 9th Yugoslav Materials Research Society Conference, Herceg-Novi, Montenegro, September 2007.

**Note: The Best Oral Presentation Award winner.**

***Preparation of Silicon Oxide-Coated Lanthanum-Strontium Manganite Nanoparticles***, Annual seminar of young researchers, Academy of Sciences and Arts, Belgrade, Serbia and Montenegro, December 2005.

***How are Cognitive Sciences Beneficial for a Fruitful Scientific Inter-Disciplinarity?***, 8th International Information Society Multiconference, Ljubljana, Slovenia, October 2005.

***Preparation of Silica-Coated Lanthanum-Strontium Manganites, for Application in Hyperthermic Treatments***, 7th Yugoslav Materials Research Society Conference, Herceg-Novi, Serbia and Montenegro, September 2005.

***On the Epistemological Foundations of Religious Experience***, “Religion and Epistemology” Conference of the Serbian Philosophical Society, Belgrade, Serbia and Montenegro, June 2005.

***On LaSr-Manganites, Reverse Micelles and the Train of Science***, 3rd Conference of Young Researchers, Academy of Sciences and Arts, Belgrade, Serbia and Montenegro, December 2004.

*Synthesis of Lanthanum-Strontium Manganites using Reverse Micelles*, Materials and Technologies Conference organized by the Slovenian Institute of Metals and Technology, Portorose, Slovenia, October 2004.

*Synthesis of Lanthanum-Strontium Manganites by a Hydroxide-Precursor Co-Precipitation Method in Solution and Reverse Micellar Microemulsion*, 6th Yugoslav Materials Research Society Conference, Herceg-Novi, Serbia and Montenegro, September 2004.

*Synthesis of Materials within Reverse Micelles*, 2nd Conference of Young Researchers, Academy of Sciences and Arts, Belgrade, Serbia and Montenegro, December 2003.

*Chemistry of the Synthesis of NiZn-Ferrites by Microemulsion-Assisted Precipitation Method*, Materials and Technologies Conference organized by the Slovenian Institute of Metals and Technology, Portorose, Slovenia, October 2003.

*Synthesis of Nanocrystalline Nickel-Zinc Ferrites via a Microemulsion Route*, 5th Yugoslav Materials Research Society Conference, Herceg-Novi, Yugoslavia, September 2003.

*Synthesis of Nanocrystalline Nickel-Zinc Ferrites within Reverse Micelles*, Materials and Technologies Conference organized by the Slovenian Institute of Metals and Technology, Portorose, Slovenia, November 2002.

## **Conference Poster Presentations:**

*Biomimicry of the Growth of Dental Enamel from Amelogenin and MMP-20 Sols using a Continuous Titration Approach*, Society for Biomaterials Conference, Seattle, WA, April 2010.

*The Role of Postdoctoral Scholars Associations in the Times of Unionization*, National Postdoctoral Association Conference, Philadelphia, PA, March 2010.

*Biomimetic Apatite Growth using Full-Length Human Amelogenin and Matrix Metalloprotease-20*, American Association of Dental Researchers (AADR) 2<sup>nd</sup> Fall Focused Symposium: Tissue Engineering of Craniofacial and Oral Tissues, San Francisco, November 2009.

*Biomimetic Apatite Growth using Full-Length Human Amelogenin and Matrix Metalloprotease-20*, The Annual University of the Pacific Dental School Symposium, San Francisco, November 2009.

*Effects of Calcium and Phosphate on Particle Size and Zeta Potential of Recombinant Human Amelogenin*, UCSF Dental School Research and Clinical Excellence Day, San Francisco, CA, October 2009.

*Sleeping Beauty*, Science and Art Exhibition at the Materials Research Society Spring Conference, San Francisco, April 2009.

*Dynamic Light Scattering and Zeta-Potential of Self-Assembled Human Amelogenins*, International Association of Dental Researchers (IADR) and American Association of Dental Researchers (AADR) Conference, Miami, FL, USA, April 2009.

*Effects of MMP-20 on Amelogenin Self-Assembly and Crystal Growth*, International Association of Dental Researchers (IADR) Conference, Toronto, ON, Canada, July 2008.

*Synthesis and Characterization of Hydroxyapatite-Collagen Biocomposite Materials*, 4th Yugoslav Materials Research Society Conference, Herceg-Novi, Yugoslavia, September 2001.

## **Co-Authored Conference Presentations:**

*One Pot and Two Step Synthesis of 1D and 2D Calcium Phosphates and Their Biomedical Characteristics*, Presented by Zoran Stojanović, YUCOMAT Conference, Herceg-Novi, Montenegro, September 2016.

*Tumor-Selective Hybrid System Based on Hydroxyapatite Nanocarrier, Chitosan, Poly(Lactic-co-Glycolic Acid) and Androstane Derivative*, Presented by Nenad Ignjatović, YUCOMAT Conference, Herceg-Novi, Montenegro, September 2016.

*On Hydrothermal Processing of 1D Hydroxyapatite Powders*, Presented by Zoran Stojanović, Pittcon 2016, Atlanta, GA, March 6, 2016.

*Rapid Bone Regeneration with Nano-Hydroxyapatite Coated with a Chitosan-Poly(D,L)-Lactide-Co-Glycolide Bone-Filling Material with Osteoconductive and Antimicrobial Properties*, Presented by Nenad Ignjatović, 3rd International Translational Nanomedicine Conference, Miločer, Montenegro, June 2015.

*How Scientists Can Contribute to Bridging the Gap between Rich and Poor: Case Studies on Molecular Designing of Nanoparticles and Functional Materials*, Presented by Dragan Uskoković, Science and Technology Forum, Seoul, South Korea, October 2012.

*Multifunctional Nano Scale Drug Delivery Particles Based on Vitamin D3-Loaded Hydroxyapatite in Bone Tissue Engineering*, Presented by Nenad Ignjatović, 14th YUCOMAT Conference of Materials Research Society - Serbia, Herceg-Novi, Montenegro, September 2012.

*Towards Sustainable Planet Earth: Small Steps for Small Countries but Big Ones for Humanity*, Presented by Dragan Uskoković, Science and Technology Forum, Seoul, South Korea, October 2011.

*Journal of Postdoctoral Affairs: The First Peer-Reviewed Journal Focused Exclusively on Topics of Relevance to Postdoctoral Scientists*, Presented by Hady Felfly and Cory Blaiss, National Postdoctoral Association Conference, Bethesda, MD, March 2011.

*Amelogenin Directed Crystal Growth during Hydrolysis*, Presented by Stefan Habelitz, International Association of Dental Researchers (IADR) Conference, Barcelona, Spain, July 2010.

*Long-Term Bond Strength and Fluoride Release Capabilities of Three Cements*, Presented by Lilliam M. Pinzon and Sally J. Marshall, International Association of Dental Researchers (IADR) Conference, Barcelona, Spain, July 2010.

*Dissolution Kinetics of Fluorapatite on the Nanoscale*, Presented by Jonathan Stahl, International Association of Dental Researchers (IADR) Conference, Barcelona, Spain, July 2010.

*Effect of Zeta-Potential on Amelogenin Guided Apatite Formation*, Presented by Stefan Habelitz, American Association for Crystal Growth (AACG) Conference, Lake Tahoe, CA, June 2010.

*Exposure to Bioactive Glass Ionic Dissolution Products Enhances hPDLF Osteogenesis*, Presented by Venu G. Varanasi and Grayson W. Marshall, American Association of Dental Researchers (AADR) Conference, Washington, DC, March 2010.

*Bond Strength and Fluoride Release Capabilities of Three Cements*, Presented by Lilliam M. Pinzon and Grayson W. Marshall, American Association of Dental Researchers (AADR) Conference, Washington, DC, March 2010.

*Analysis of Hydroxyapatite and Amelogenin Interaction using Dynamic Light Scattering*, Presented by Frances Yang, UCSF Dental School Research and Clinical Excellence Day, San Francisco, CA, October 2009.

*Dynamic Light Scattering and Zeta-Potential of Self-Assembled Human Amelogenins*, Presented by Zachery Castiglione, UCSF Dental School Research and Clinical Excellence Day, San Francisco, CA, October 2008.

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## Grants and Fellowships:

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**2016. NSF-DMR Award** - MRI: Acquisition of a Dual-EELS Gatan Quantum imaging spectrometer to upgrade the JEOL ARM200CF at UIC. PI: Robert Klie, Role: Co-PI

**2015 - 2016. NIH R25 High School Teacher Research Experience.** Department of Bioengineering, University of Illinois, Chicago. PI: Miiri Kotche. Role: Co-PI

**2014 - 2018. NIH/NIDCR R00-DE021416 Pathway to Independence Award** – “Osteogenic Calcium Phosphate Nanoparticles with Designable Drug Release Kinetics”. Role: PI

**2010 - 2013. NIH/NIDCR K99-DE021416 Mentored Career-Directing Research Award** – “Osteogenic Calcium Phosphate Nanoparticles with Designable Drug Release Kinetics”. Role: PI

**2009 - 2013. National Electron Microscopy Center**, Lawrence Berkeley National Lab, User Project Proposal #1375: “Transmission Electron Microscopy of Amelogenin and Hydroxyapatite Nanoparticles Relevant for *In-vitro* Synthesis of Dental Enamel”.

**2007 - 2010. Portuguese Ministry of Science and Technology** - “Nanotemplating of Calcium Phosphates for Gene Delivery using Dendrimers”, SFRH/BPD/38775/2007.

**2004 - 2006. PhD Scholarship.** Awarded by Ad Futura Science and Education Foundation of the Republic of Slovenia.

**1995 - 2001. BSc/MS Scholarship.** Awarded by the Ministry of Science and Education of the Republic of Serbia.

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## Teaching/Mentoring Experience:

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**2019 – Present:** Mentor to 2 PhD students in the Mechanical and Aerospace Engineering and Materials Science programs (*Alexander T. Hwu, Albert Cisquella Serra*).

**2016 - 2018. Chapman University:**

BCHM320: Biotechnology & Bioengineering course, Guest lecturing.

PHRM642: Biopharmaceuticals, PharmD course (2 credit hours, Design + Lecturing).

PHS632: Medical Devices, MSPS/PhD student course (3 credit hours, Design + Lecturing).

PHS604: Biologics, MSPS/PhD student course (2 credit hours, Design + Lecturing)

**2014 - 2016. University of Illinois at Chicago:**

BioE 101: Introduction to Bioengineering, Guest Lecturing.

BioE 310: Biological Systems Analysis: Guest Lecturing.

BioE 415: Biomechanics, Guest Lecturing.

BioE 455: Cell and Tissue Engineering, Guest Lecturing.

BioE 460: Materials in Bioengineering, Full Course (3 credit hours, Design + Lecturing).

BioE 470: Bio-optics, Guest Lecturing and Instructor Substitute.

BioE 494: Fundamentals of Nanoengineering, Full Course (3 credit hours, Design + Lecturing).

**2016 – 2018. Chapman University:** Mentor to 1 MS student (*Abhinav Grover*), 2 technical students (*Sean Tang, Eric Huynh*) and 1 undergraduate (*Caroline Sun*).

**2015. Indian Institute of Technology at Kharagpur:** Condensed 30-Hour Global Initiative for Academic Networks Winter Term Course taught on the topic of nanobiotechnologies.

**2011 – 2013. Mentor in the NIH Bridges to the Baccalaureate Program.** Promoting the academic path for minority students (awardee/mentee: *Samir Batarni*).

**2019 - 2020. Mentor in the Fullbright Foundation program** (awardee/mentee: *Joanna Kolmas*)

**2016 - 2017. Mentor in the Rosztoczy Foundation program** (awardee/mentee: *Adrienn Petho*)

**2014 - 2016. University of Illinois at Chicago:** mentor to 6 PhD students in my lab (*Shreya Ghosh, Mohammed Khan, Pooja Neogi, Maheshwar Adiraj Iyer, Amit Paul and Daniel Lee*), 3 MS students (*Sebastian Pernal, Jarrett Mickens, Mehar Cheema*), and 1 undergraduate (*Najah Ahsan*).

**2014 - 2016. University of Illinois at Chicago:** primary academic advisor to 16 undergraduate students in the bioengineering program (average rating by the students = 4.3 on 1 – 5 scale).

**2016 – 2018. Chapman University:** primary academic advisor to 12 students in the Pharm.D. program.

**2014. Serbian Ministry of Science and Education:** Advisor to 4 PhD students in Serbian universities.

**2008 – 2013. University of California, San Francisco:** Mentor to 4 PhD students (*Kunwoo Lee, Phin Peng Lee, Frances Yang, Jennifer Kim*), 6 DDS students (*Zachery Castiglione, Shih-yen Paul Hsiao, Jonathan Stahl, Brittany Gonzales, Roselyn Odsinada, Sonia Djordjevic*), and 2 undergraduates (*Samir Batarni, Tej Sachdev*) in the Marshall, J. D. Featherstone, Habelitz and Desai Labs at UCSF:



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## Awards:

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- 2014. Certificate of Appreciation**, World Congress on Preventive and Regenerative Medicine, Taipei, Taiwan.
- 2013. Certificate for Innovation**, American Chemical Society, Washington, DC.
- 2013. American Chemical Society Publications Summer Institute 2013 Travelship**, Washington, DC, July/August 2013.
- 2011. K99/R00 Pathway to Independence Award** from the National Institutes of Health.
- 2012, 2010. Inclusion by invitation to A. N. Marquis' 2012 and 2010 editions of Who's Who in America**, pp. 4805 (2010).
- 2009. UCSF Postdoctoral Scholar Travel Award.**
- 2007. The Best Oral Presentation Award winner**, YUCOMAT 2007 Conference of the Serbian Materials Research Society, Herceg-Novi, Montenegro.
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## Contribution to the profession:

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### Reviewer for the following journals:

ACS Applied Bio Materials	Ceramics International
ACS Applied Materials and Interfaces	ChemElectroChem
ACS Applied Nano Materials	Colloids and Surfaces A: Physicochem. Eng. Asp.
ACS Nano	Colloids and Surfaces B: Biointerfaces
Acta Biomaterialia	Computer Methods and Programs in Biomedicine
Adsorption	Crystal Growth and Design
Advanced Functional Materials	Crystals
Advances in Colloid and Interface Science	Current Nanoscience
Advances in Natural Sciences: Nanosci. Nanotech.	Current Pharmaceutical Design
African Journal of Pharmacy and Pharmacology	Drug Delivery
American Institute of Chemical Engineers Journal	Epigenomics
Analyst	Expert Opinion on Drug Delivery
Applied Surface Science	Expert Review of Clinical Immunology
Arabian Journal of Chemistry	Frontiers in Bioengineering and Biotechnology
Bioactive Materials	Human Gene Therapy
Biochimica et Biophysica Acta	Interface Focus
Bioconjugate Chemistry	International Journal of Chemical Kinetics
Biomaterials	Int. J. of Information Systems and Social Change
Biomedical and Environmental Sciences	International Journal of Medical Sciences
Biomedical Microdevices	International Journal of Modern Physics B
BioMed Research International	International Journal of Molecular Science
Cancer Treatment Reviews	International Journal of Nanomedicine
Chemical Engineering Journal	International Journal of Pharmaceutics

International Journal of Psychology and Counseling	Materials Research Bulletin
International Journal of Radiation Biology	Materials Science and Engineering C: Mat.Bio.App.
Journal of Alloys and Compounds	Materials Science Forum
Journal of Applied Physics	Medical Practice and Reviews
Journal of Biomaterials Applications	Microchemical Journal
Journal of Biomaterials Science: Polymer Edition	Mini-Reviews in Medicinal Chemistry
Journal of Biomedical Materials Research Part B	Molecular Pharmaceutics
Journal of Colloid and Interface Science	MRS Conference Proceedings
Journal of Composite Materials	Nanomedicine
Journal of Crystal Growth	Nanoscale
Journal of Drug Targeting	Nanotechnology
Journal of Functional Biomaterials	New Journal of Chemistry
Journal of Hazardous Materials	Physica B: Condensed Matter
Journal of Materials Chemistry B	Process Biochemistry
Journal of Materials Science	RSC Advances
Journal of Microencapsulation	Scientific Reports
Journal of Molecular Structure	Smart Materials and Structures
Journal of Periodontology	Solid State Sciences
Journal of Physics: Condensed Matter	Surface Engineering
Journal of the American Ceramic Society	Technological Forecasting & Social Change
Journal of the Royal Society Interface	Technology, Knowledge and Learning
Journal of the Taiwan Institute of Chem. Engineers	Theranostics
Langmuir	Therapeutic Delivery
Materials	Tissue Engineering
Materials and Manufacturing Processes	Translational Research
Materials Chemistry and Physics	Ultrasonics - Sonochemistry
Materials Letters	Vascular Health and Risk Management

**Author of papers cited ~ 3000 times. Hirsch index = 32** (*i.e.*, 32 papers cited no less than 32 times each)  
(Source: Google Scholar citation database, 2019).

**Early Career Reviewer (ECR) program** participant at the Center for Scientific Review (CSR), National Institutes of Health (NIH).

**Educational Symposium Lead Organizer**, Materials Research Society Meeting, San Francisco, CA, 2014.

**Associate Editor**, Nano-Based Drug Delivery section, Frontiers in Medical Technology.

**Editorial Board Member**, Bioactive Materials, ScienceDirect Journal, KeAi Publishing, Beijing, China & Elsevier, NL.

**International Scientific Committee Member**, 2018 Biomaterials for Healthcare Conference (BioMaH).

**Awards Committee**, 2019 World Round Table & Conference on Sintering and 2019 YUCOMAT Conference, Herceg-Novi, Montenegro.

**Organizing Committee Member**, XVI European Ceramics Society Conference, Ceramics and Glasses for Healthcare Symposium, Turin, Italy, 2019.

**Neuro-Oncology Symposium Chair**, Neuro Talks Media Limited Conference, Madrid, 2020.

**Reviewer/Consultant**, Life Science Angels Investment Group, Sunnyvale, CA.

**Program Review Committee**, 2019 Tissue Engineering and Regenerative Medicine International Society Conference, 2019 Society for Biomaterials Conference, 2017, 2018 & 2019 TechConnect World Innovation Conferences.

**Member**, American Chemical Society, Materials Research Society & American Association of Colleges of Pharmacy.

**Consultant**, Science Advisory Board.

**Judge**, 37th Irvine Unified Science Fairs, 2018.

**International Advisory Board Member**, Materials Research Society – Serbia.

**Session Chair**, *Nanotechnology and Nanosciences Session (Life Sciences & Medicine)*, NanoWorld Conference, San Francisco, CA, April 23 - 25, 2018.

*Nano and Mesostructured Materials Symposium*, Advances in Functional Materials Conference, Los Angeles, CA, August 14 – 17, 2017.

*From Solid State to Biophysics VIII: From Basic to Life Sciences Conference*, Cavtat, Croatia, June 2016.

*Nanomedicine Symposium*, 7<sup>th</sup> World Congress on Preventive and Regenerative Medicine, Taipei, Taiwan, November 2014.

*Nanomaterials and Advanced Materials Synthesis and Processing Sections*, YUCOMAT Conference of the Serbian Materials Research Society, Herceg-Novi, Montenegro, Septembers 2010, 2011, 2012, 2013, 2014, 2016, 2017.

**Elsevier Science & Technology**, Pre-contract market assessment and peer review of books on nanotechnology.

**Organization Committee Member**. Young Researchers' Conference on Materials Science and Engineering, Belgrade, Serbia.

**External reviewer**, National Science Center of the Republic of Poland.

**Member**, Executive Council, Nano Special Interest Group, Society for Biomaterials.

**Award Committee**. The annual National Postdoctoral Association meeting, Philadelphia, PA.

**Poster Judge**. Annual UCSF Graduate Student Association Research Days.

**Founding Editor-in-Chief, Journal of Postdoctoral Affairs**, the first peer-reviewed journal specialized in postdoctoral policies and affairs.

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## University service:

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**2017 - 2018. Senator** for the Dept. of Biomedical and Pharmaceutical Sciences and School of Pharmacy at the Chapman University Faculty Senate, representing all 40 faculty in the School of Pharmacy.

**2017 – 2018. Assessment and Item Review Committee**, Dept. of Biomedical and Pharmaceutical Sciences, Chapman University.

**2017. Strategic Planning Committee**, Dept. of Biomedical and Pharmaceutical Sciences, Chapman University.

**2016. Research and Graduate Program Committee**, Chapman University School of Pharmacy (tasks: graduate student admissions, evaluations, conference fellowship awards, intramural research grant review and allocations, core facility management, etc.)

**2016 - 2018. Founding Member**, Chapman University Center for Targeted Drug Delivery.

**2016 - 2018. Interviewer** for dozens of regular and FAEP applicants for the Pharm.D. program at Chapman University.

**2014 – Present. UIC Electrochemistry Collaborative Group Member.**

**2014 - 2015. UIC Nanotechnology Core Facility Faculty Advisory Group Member.**

**2014 - 2017. PhD thesis advisory and defense committee member**, Nemanja Aničić, PhD program in Nanoscience and Nanotechnologies, Jožef Stefan International Postgraduate School, Slovenia (Primary advisors: Marija Vukomanović, Danilo Suvorov), Chun-Chieh Huang, College of Dentistry, PhD dissertation, UIC (Primary advisor: Anne George); Gerardo Mauleon, PhD program in Bioengineering, UIC (Primary advisor: David Eddington); Chi Bang, PhD program in Bioengineering, UIC (Primary advisor: Jun Cheng).

**2014 - 2015. Interviewer** of dozens of applicants for UIC Department of Bioengineering and School of Medicine Tenure-Track Professorships and Residencies.

**2009 – 2010. President of the UCSF Postdoctoral Scholars Association**, one of the oldest and biggest of its kind in the US with circa 1,200 active members and the Executive Council comprising 20 Chairs and 14 campus committee representatives.

**2009 - 2010. President of the University of California Council of Postdoctoral Scholars**, representing circa 10,000 postdocs from all Californian universities, including UC, Stanford, Sanford-Burnham, Caltech, Scripps, City of Hope, Lawrence Berkeley and Lawrence Livermore National Labs.

**2009 – 2010. UCSF Postdoc President and Representative:**

UCSF Chancellor's Council

UCSF Graduate Council

UCSF Office of Career and Professional Development Advisory Board

University of California Council of Postdoctoral Scholars

UCSF Graduate Student Association

National Postdoctoral Association meeting, Houston, TX, March 2009  
National Postdoctoral Association meeting, Philadelphia, PA, March 2010.  
The UC Gould Commission for the Future Town Hall meeting, December 2009.  
The UC Board of Regents meeting, UCSF Mission Bay Campus, May 2010.  
A part of the 6-member UCSF team at the inauguration of UCSF Chancellor Susan Desmond-Hellmann and UC Davis Chancellor Linda Katehi, Asian Art Museum, San Francisco, CA, 2010.

**2008 - 2009. Practice of Science Chair of the UCSF Postdoctoral Scholars Association**

Organized a series of lectures, attracting and hosting the following speakers:

Nobel Laureate in Chemistry, *George Olah*;

Founder of Green Chemistry, *John C. Warner*;

Philosopher, senator, former finance minister and presidential candidate of Chile, *Fernando Flores*;

Sociologist and the former Green Party gubernatorial candidate for New York state, *Stanley Aronowitz*;

Bestselling UCLA neuroscientist, *Jeffrey M. Schwartz*, and UCB quantum physicist, *Henry Stapp*;

Abbott of San Francisco Zen Center, *Paul Haller*, and a constructivist philosopher, *Urban Kordeš*.

**Note: all lectures available via YouTube.**

**2009 – 2010. Contributing writer**, UCSF Student magazine Synapse.

**2008 – 2011. UCSF volunteer:**

1st and 2nd National Postdoc Appreciation Days, September 24, 2009, September 22, 2010.

PSA organized mentoring panels, social hours, holiday parties, and outdoor events.

Translator of the UCSF postdoc orientation web page to Serbo-Croatian, 2010.

IRACDA Conference on Research & Teaching, June 2009, San Francisco, CA.

**2004 – 2006. Inaugural Graduate Student President** and Representative at the Faculty Council, Jožef Stefan International Postgraduate School, representing circa 60 graduate students in all programs.