**Curriculum Vitae**

***1. Personal information:***

First name: Jana
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***Executive summary***

- Guest editor for Polymers (IF 4.329), Special Issue "Functional polymers for drug delivery"
- Member of Topical Advisory Panel for ""Biomacromolecules, Biobased and Biodegradable Polymers" Section of Polymers.
- Chairman at "2nd Bucharest Polymer Conference", University Politehnica of Bucharest (http://www.bpc-apmg.upb.ro/)
- 18 journal articles, attendance at more than 15 prestigious national/international conferences, more than 8 oral presentations;
- Referee reviewer for Polymer Chemistry (RSC), Journal of Food Science and Technology, American Journal of Nanotechnology & Nanomedicine; Biomolecules, Molecules.

***2. Education***

**October 2015 – December 2018**
PhD studies in the field of Chemical Engineering at University Politehnica of Bucharest, Faculty of Applied Chemistry and Materials Science, Department of Bioresources and Polymer Science.
PhD thesis: "*Nanocomposites based on polymeric nanoparticles with medical applications*"
**September 2008 - June 2010**
Master studies in the field of Chemical Technology and Biotechnology at State University of Republic of Moldova, Faculty of Chemistry and Chemical Technology
**September 2005 - June 2008**
Bachelor studies in the field of Chemical Technology and Biotechnology at State University of Republic of Moldova, Faculty of Chemistry and Chemical Technology

***3. Professional experience***

**Researcher CS** (september 2021- ongoing) „HemDelStim, PN-III-P4-ID-PCE-2020-1154 PCE239/2021
**Researcher CS III** (march 2021-ongoing) " Nanostructured self-healing hydrogels for articular cartilage tissue engineering", PN-III-P1-1.1-TE2019-1161, APMG
**Researcher CS III** (september 2020-ongoing) "Towards accurate cross section measurements by developing new methods for characterisation of the γ-ray beam at ELI-NP / ELI_GAMMA_ACCURATE" in cadrul CDI
**Project leader** (1st September 2020 – ongoing) "DNA-BIOMATTER, Novel DNA-activated 2D electrospun nanofibrous hybrid (bio)scaffolds based on graphene oxide-natural polymers with potential application in musculoskeletal disorders" PN-III-P1-1.1-PD-2019-0205.

**Researcher CS III** (February 2020 -ongoing) at University Politehnica of Bucharest, Faculty of Applied Chemistry and Material Science, Department of Bioresources and Polymer Science.

**Research assistant** (December 2018 – February 2020) at "Research Center for Advanced Materials, Products and Processes" - CAMPUS, University Politehnica of Bucharest. *Main activities*: responsible for the coordination of research activities in the Laboratory of advanced methods for polymers and nanomaterials processing; Laboratory of intelligent systems for controlled release; Laboratory for Advanced Chromatographic and Spectroscopic analysis.

**Postdoctoral fellowship** (June 2019 – January 2021) individual grant won through the competition within the project POCU, SMIS code 124705, in the field of Chemical Engineering at Faculty of Applied Chemistry and Materials Science, University Politehnica of Bucharest.

**Research assistant (**September 2017 – November 2018) GEX 81/2017 "3D printed smart composites", Advance Polymer Materials Group (APMG).
Main activities: design of scaffolds based on biopolymers using the 3D printing technology; synthesis and characterization of polymeric nanoparticles; design and characterization of 3D printed scaffolds loaded with polymeric nanoparticles (eg. DLS, encapsulation efficiency, release studies, UV-VIS).
**Research assistant** (August 2017 – December 2019) PN-III-P4-ID-PCE-2016-0818 "Innovative benzoxazine – functionalized graphene oxide nanocomposites", APMG.
Main activities: synthesis of benzoxazine using different methods; covalent grafting of dendrimers on the surface of graphene oxide; functionalization and characterization graphene oxide (eg. FTIR, Raman, DSC).

**Research assistant** (May 2016 - December 2017) PNII-RU-TE-2014-4-1423 "Smart click-chemistry approach to design innovative thiol containing polymers for high performance dental materials" APMG.
Main activities: synthesis of new materials based on thiol-epoxy click reaction; chemical reaction between thiol-metacrilate/dimetacrilate; new composite materials reinforced with POSS.

**Assistant Lecturer for laboratory activities** (since October 2016) Faculty of Applied Chemistry and Materia Science and Faculty of Medical Engineering, University Politehnica of Bucharest.

**Supervisor for scientific works:**

May 2017 **"**The effect of technical parameters on the synthesis of PLGA-based nanoparticles with potential biomedical applications" presented by N. Levinta at the "Students Scientific Communications Session within Faculty of Applied Chemistry and Material Science;

May 2020 "Functionalized nanoparticles: a new strategy in targeted drug delivery" presented by A. Zainea at the "Students Scientific Communications Session within Faculty of Applied Chemistry and Material Science;

May 2020 "Fibrous composite scaffolds based on Gelatin-PVA-Graphene oxide with potential biomedical applications", presented by AC. Iancu at Students Scientific Communications Session within Faculty of Applied Chemistry and Material Science, won 3$^{rd}$ place.

July 2020 – co-coordinator of bachelor thesis entitled "Fibrous composite scaffolds based on Gelatin-PVA-Graphene oxide with applications in dermal medicine", presented by AC. Iancu Faculty of Medical Engineering, University Politehnica of Bucharest.

### *4. Internships and trainings*

**Internship** (May 2018 – July 2018) "*Assembly dynamics of DNA-based nanoparticles and microfluidics-directed synthesis*" Universite Paris-Sud, Laboratoire de Physique des Solides, Orsay, France.

*Main skills:* synthesis of DNA-polymer nanoparticles/complexes for gene delivery, performing the kinetics experiments of the complexation reaction by light scattering, study the stability of DNA-loaded nanoparticles at different N/P ratio, obtaining nanoparticles by microfluidics, morphologic characterization using X-ray scattering, crio-TEM, and DLS.

**Training:** Obtaining fibrous structures using Electrospinning technique (13.12.2017-15.12.2017)

*Main skills:* electrospinning of different types of natural/synthetic polymer, obtaining scaffolds based on nano/microfibers with random or hierarchical architecture, fibers with core-shell structure. The role of key-parameters in engineering fibers with optimal characteristics.

**Training**: Versatility and importance of Dynamic Light Scattering technique in designing materials for (bio)nanomedicine (20.02.2018-27.02.2018)

*Main skills:* study of hydrodynamic characteristics, electrophoretic mobility of different colloids with nanometer dimension (e.g., polymeric nanoparticles, polyplexes, micelles) interaction between colloids, stability of proteins, surface zeta potential of a material, micro-rheology, molecular weight of a substance, hydrodynamic features and stability of various macroemulsions.

### *Skills and competences*

- Polymeric nanoparticles with potential application in drug delivery and controlled release - design, formulation, and characterization.
- Development of new hybrid nanoparticles based on polymer-vegetable oils as optimal nanocarriers for various lipophilic drugs (e.g. Indomethacin, Retinol, Curcumin, Izohidrafural).
- Synthesis of hybrid materials based on (bio)polymers reinforced with POSS, graphene oxide with application in hard tissue engineering. Synthesis of fibrous scaffold based on gelatin, PVA, with controlled architecture using electrospinning technique.

*Physico-chemical* characterization of material: DLS, UV-VIS, FTIR, RAMAN, XPS, TEM, SEM, thermal: DSC, DMA, TGA, *mechanical*: nanoindentation, as well as release studies, drug loading (DL), encapsulation efficiency (EE), CLSM (confocal laser microscopy)