



## Formular për punën shkencore të realizuar Формулар за реализирана научна работа Form for realized Scientific Work

Formulari i nënshkruar dhe me email duhet ti dorezohet Dekanit dhe ai e dorezon te pro-rektori për shkencë  
Формуларот пополнет и потпишан преку емаил треба се достави до деканот а тој до проректорот за наука.  
The form should be delivered signed hard copy and emailed to the Dean of Faculty and he to Vice Rector for Science

<b>Emri Mbiemri</b> (dhe Nënshkrimi) <b>Име Презиме</b> (и Потпис)	Златко Неделкоски
<b>Titulli akademik</b> (data dhe viti kur eshte marur) <b>Наставно-научно звање</b> (датум и год. кога е добиена)	Доцент по Физика, 2017
<b>Drejtimi / Fakulteti</b> <b>Смер / Факултет</b>	Технички Факултет
<b>Fusha e punimeve shkencore</b> (Frascati) <b>Области на трудовите</b> (Frascati)	Физика

**Published Research in the past 5 years** (List all papers under proper time category starting with most recent)  
**Hulumtimi i Publikuar ne 5 vitet e fundit** (Listoi te gjitha punimet me renditje kohore, duke filluar nga i fundit)  
**Публикувани трудови во последните 5 години** (Излистај ги сите по хронолошки аспект почнувајќи од последната)

### CONFERENCES - Konferencat – Конференции

Local Conference (2015-2020)		
1	Reference	
	Link published	
2	Reference	
	Link published	

National Conference (2015-2020)		
1	Reference	
	Link published	
2	Reference	
	Link published	

International Conference (2015-2020)		
1	Reference	Nedelkoski Z., et al. Atomic study of Hybrid Spintronic Heterostructures: Co <sub>2</sub> FeAl <sub>0.5</sub> Si <sub>0.5</sub> /Ge(111). Proceedings of Microscopy and Microanalysis 23, S1, 1762–1763 (2017).
	Link published	
2	Reference	Kepaptsoglou D., et al. Nonstoichiometric Twin Defects in Fe <sub>3</sub> O <sub>4</sub> (111) Thin Films: Atomic and Electronic Structure. Proceedings of Microscopy & Microanalysis, 22, S3, 1698–1699 (2016).
	Link published	

### JOURNALS

Local Journal (2015-2020)

1	Reference	
	Link published	
2	Reference	
	Link published	

#### National Journal (2015-2020)

1	Reference	
	Link published	
2	Reference	
	Link published	

#### International Journal (2015-2020)

1	Reference	
	Link published	
2	Reference	
	Link published	

#### International Journal with Impact Factor ISI Web of Science – Clarivate analytics (2015-2020)

1	Reference	B. Kuerbanjiang et al. Effect of annealing on the structure and magnetic properties of Co <sub>2</sub> FeAl <sub>0.5</sub> Si <sub>0.5</sub> thin films on Ge(111). Journal of Alloys and Compounds 748, 323–327 (2018).
	Link published	
2	Reference	Nedelkoski Z., et al. Origin of reduced magnetization and domain formation in small magnetite nanoparticles. Scientific Reports 7, 45997 (2017).
	Link published	
		Nedelkoski Z., et al. The antiphase boundary in half-metallic Heusler alloy Co <sub>2</sub> Fe(Al,Si): atomic structure, spin polarization reversal, and domain wall effects. Applied Physics Letters 109, 222405 (2016).
		Nedelkoski Z., et al. Realisation of magnetically and atomically abrupt half-metal/semiconductor interface: Co <sub>2</sub> FeSi <sub>0.5</sub> Al <sub>0.5</sub> /Ge(111). Scientific Reports 6, 37282 (2016).
		Nedelkoski Z., et al. Controlling the half-metallicity of Heusler/Si(111) interfaces by a monolayer of Si-Co-Si. Journal of Physics Condensed Matter 28, 395003 (2016).
		Gilks D., et al. Polar spinel-perovskite interfaces: an atomistic study of Fe <sub>3</sub> O <sub>4</sub> (111)/SrTiO <sub>3</sub> (111) structure and functionality. Scientific Reports 6, 29724 (2016).
		Kuerbanjiang B., et al. The role of chemical structure on the magnetic and electronic properties of Co <sub>2</sub> FeAl <sub>0.5</sub> Si <sub>0.5</sub> /Si(111) interface. Applied Physics Letters 108, 172412 (2016).
		Gilks D., et al. Atomic and electronic structure of twin growth defects in magnetite. Scientific Reports 6, 20943 (2016).
		Nedelkoski Z., et al. The effect of atomic structure on interface spin-polarization of half-metallic spin valves: Co <sub>2</sub> MnSi/Ag epitaxial interfaces. Applied Physics Letters 107, 212404 (2015).

#### Studies and monographs (Local, National, International publication house) (2015-2020)

1	Reference	
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	Link published	
2	Reference	
	Link published	

**Books (Local, National, International publication house) (2015-2020)**

1	Reference	
	Link published	
2	Reference	
	Link published	

**Projects (2015-2020)**

1	Reference	
	Link published	
2	Reference	
	Link published	

\* - International Conference or Journal is considered the one that has at least 50% international members in the editorial board.

# ZLATKO NEDELKOSKI

## Education

September 2009 – July 2013

**Undergraduate studies** in Physics at the Faculty of Natural Sciences and Mathematics, Ss. Cyril and Methodius University, Skopje, Macedonia.

**Module:** Theoretical Physics.

**Average grade:** 10.00/10.00.

January 2014 – April 2017

**PhD in Physics** at the University of York, UK.

Thesis title: The atomic and spin-electronic structure of interfaces and extended structural defects in the Co-based full Heusler alloys.

October 2017 -

**Work Experience:** Associate Professor, Physics, Mother Theresa University, Skopje, Macedonia

## Awards

1<sup>st</sup> Prize at the National Physics Competition (May 2007, Skopje, Macedonia) for secondary school students, organised by the Society of Physicists of Macedonia.

Awarded (November 2013) as Best Student of the generation 2012 -2013 at the Department of Physics, Faculty of Natural Sciences and Mathematics, Ss. Cyril and Methodius University, Skopje, Macedonia.

## Research articles in international journals

[1] Petreska I., et al. Axially symmetrical molecules in electric and magnetic fields: energy spectrum and selection rules. *Central European Journal of Physics* **11**(4), 412 (2013).

[2] Lari L., et al. Correlations between atomic structure and giant magnetoresistance ratio in  $\text{Co}_2(\text{Fe,Mn})\text{Si}$  spin valves. *Journal of Physics D: Applied Physics* **47**, 322003 (2014).

[3] Nedelkoski Z., et al. Magnetic properties of electrons confined in an anisotropic cylindrical potential. *Physica B – Condensed Matter* **452**, 113 (2014).

[4] Nedelkoski Z., et al. The effect of atomic structure on interface spin-polarization of half-metallic spin valves:  $\text{Co}_2\text{MnSi}/\text{Ag}$  epitaxial interfaces. *Applied Physics Letters* **107**, 212404 (2015).

- [5] Gilks D., et al. Atomic and electronic structure of twin growth defects in magnetite. *Scientific Reports* **6**, 20943 (2016).
- [6] Kuerbanjiang B., et al. The role of chemical structure on the magnetic and electronic properties of  $\text{Co}_2\text{FeAl}_{0.5}\text{Si}_{0.5}/\text{Si}(111)$  interface. *Applied Physics Letters* **108**, 172412 (2016).
- [7] Gilks D., et al. Polar spinel-perovskite interfaces: an atomistic study of  $\text{Fe}_3\text{O}_4(111)/\text{SrTiO}_3(111)$  structure and functionality. *Scientific Reports* **6**, 29724 (2016).
- [8] Nedelkoski Z., et al. Controlling the half-metallicity of Heusler/Si(111) interfaces by a monolayer of Si-Co-Si. *Journal of Physics Condensed Matter* **28**, 395003 (2016).
- [9] Nedelkoski Z., et al. Realisation of magnetically and atomically abrupt half-metal/semiconductor interface:  $\text{Co}_2\text{FeSi}_{0.5}\text{Al}_{0.5}/\text{Ge}(111)$ . *Scientific Reports* **6**, 37282 (2016).
- [10] Nedelkoski Z., et al. The antiphase boundary in half-metallic Heusler alloy  $\text{Co}_2\text{Fe}(\text{Al},\text{Si})$ : atomic structure, spin polarization reversal, and domain wall effects. *Applied Physics Letters* **109**, 222405 (2016).
- [11] Nedelkoski Z., et al. Origin of reduced magnetization and domain formation in small magnetite nanoparticles. *Scientific Reports* **7**, 45997 (2017).
- [12] Kuerbanjiang B. et al. Effect of annealing on the structure and magnetic properties of  $\text{Co}_2\text{FeAl}_{0.5}\text{Si}_{0.5}$  thin films on Ge(111). *Journal of Alloys and Compounds* **748**, 323–327 (2018).