Annex 1
Approved by VU Pro-Rector for Research order No. D–127 on the 15th of March 2021

LIST OF DISSERTATIONS TOPICS FOR DOCTORAL STUDIES COURSES IN 2021

NATURAL SCIENCES

Scientific area	Topics of doctoral dissertations	Supervisors
CHEMISTRY – N 003	1. *Synthesis of inorganic perovskite nanoparticles and their application in solar cells*	Prof. Artūras Katelnikovas
	2. *Investigation of crystallization and phase transitions in calcium phosphates*	Dr. Aleksej Žarkov
	3. *Synthesis of calcium phosphates with antibacterial properties*	Dr. Aleksej Žarkov
	4. *Application of metallic and carbon-based nanomaterials in biological sensors*	Dr. Anton Popov
	5. *Investigation of applicability of paper in the food industry using chromatographic method*	Prof. Vida Vičkačkaitė
	6. *Modification of yeast (Saccharomyces cerevisiae) cells for bioanalytical and/or bioenergetic applications*	Doc. Aušra Valiūnienė
	7. *Application of Scanning Electrochemical Microscopy for modification of model membranes systems with electric impulse*	Doc. Aušra Valiūnienė
	8. *Application of self-assembling structures for the development of sensors*	Prof. Arūnas Ramanavičius
	9. *Synthesis of novel conducting polymers and application for biosensors*	Prof. Arūnas Ramanavičius
	10. *Functionalization of wood using nanoparticles: reduction of flammability and investigation of other properties*	Doc. Ramūnas Skaudžius
	11. *Investigation of the application of ozone for the treatment of undeground oil contaminants*	Prof. Aivaras Kareiva
	12. *Synthesis of calcium hydroxyapatite having different morphology, comparison of properties and application in cosmetology*	Dr. Edita Garškaitė
	13. *Modern characterization of biological specimens using different techniques*	Prof. Aivaras Kareiva
	14. *Photo-active supramolecular systems*	Prof. Edvinas Orentas

	15. *Molecular recognition, encapsulation and catalysis in nanospace*	Prof. Edvinas Orentas
	16. *Hydrolytically stable catechol brush copolymers*	Prof. Ričardas Makuška