

Prospective supervisor's form

Name of the supervisor: Robert Tylingo

Academic title: PhD D.Sc

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Faculty of Chemistry

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Discipline: chemical sciences [NCh] none

Optional

Key words (obligatory four key words describing research interests / expertise):

chitosan

collagen

functional materials

3D printing

Bibliometric indicators

1. Number of journal publications in WoS/ Scopus 25

2. Citations excluding self-citations WoS 201 Scopus 214

3. Hirsch index WoS 7 Scopus 7

1. The number of PhD students who have graduated under your supervision: 2

2. The number of PhD students currently supervised:

a. within the current doctoral school 0

b. within doctoral studies (previous system) 2

3. Are you currently accepting new PhD students:

a. Polish Yes/No Yes

b. Foreign Yes/No Yes

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Research interests or topics offered for PhD research (no more than 2000 characters)ⁱⁱ

Topic:

Development of new antimicrobial materials dedicated to 3D printing using commercial additive manufacturing methods.

Research topics include issues related to the development of new functional materials based on natural polymers, including chitosan, collagen and gelatin, and their modified derivatives. Characteristics of these materials and attempts to adapt in new technologies such as additive manufacturing techniques in the form of thermoplastic materials, light-curing resins and bioinks.

Funding or special equipment needed to carry out a PhD projectⁱⁱⁱ:

1. Is funding available for experimental work: *Yes/No/not needed*

Yes

2. Is the equipment needed to complete a PhD project

available in your lab/department: *Yes/No/not needed*

Yes

Most important publications – no more than 5 published after 1.01.2018

No	Authors/title/journal	Number of points according to the current list of the Ministry of Science and Higher Education	Publication year
1.	Mania S., Partyka K., Pilch J., Augustin E., Cieřlik M., Ryl J., Jinn J.-R., Wang Y.-J., Michałowska A., Tylingo R. Obtaining and characterization of PLA/chitosan foams for tissue engineering obtained by emulsification combined with the dissolution of chitosan by CO ₂ saturation. <i>Molecules</i> , 24, 4532.	100	2019
2.	Mania S., Ryl J., Jin J.-R., Wang Y.-J., Michałowska A., Tylingo R. The Production Possibility of the Antimicrobial Filaments by Co-Extrusion of the PLA Pellet with Chitosan Powder for FDM 3D Printing Technology. <i>Polymers</i> , 11, 1893.	100	2019

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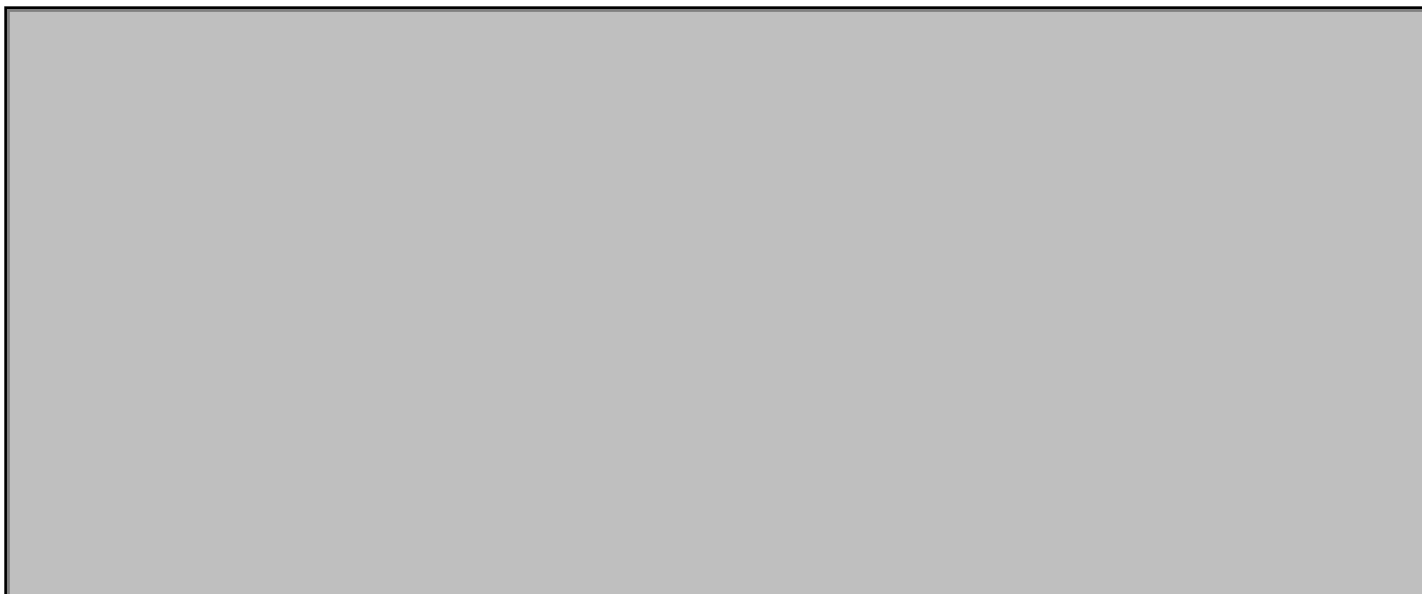
3.	Mania S., Tylingo R., Augustin E., Gucwa K, Szwacki J., Staroszczyk H. Investigation of an elutable N-propylphosphonic acid chitosan derivative composition with a chitosan matrix prepared from carbonic acid solution. Carbohydrate Polymers, 179, 196-206.	140	2018
4.	Mania S., Tylingo R., Michałowska A. The Drop-in-Drop Encapsulation in Chitosan and Sodium Alginate as a Method of Prolonging the Quality of Linseed Oil, Polymers, 10, 1355.	100	2018
5.	Szweda P., Gorczyca G., Tylingo R. Comparison of antimicrobial activity of selected, commercially available wound dressing materials. Journal of Wound Care, 27, 320-326.	70	2018

Most recent externally funded projects you were involved in – no more than 3

No	Project title, the name of the Principal Investigator (PI) and the institution the project was carried out	Years	Role in the project ^{iv}
1.	Development of an innovative technology production of new dermocosmetics for personal hygiene, based on chitosan hydrogel. POIR.01.01.01-00-0013/18. NCBiR. Led by Chitone Sp. z o.o., whose future supervisor is a shareholder and co-author of the proposal. Chemical Faculty, GUT.	2019-2022	Co-I
2.	Implementation of the results of R&D works leading to the start of the production of laminate tubes with microbiological protection POIR.03.02.01-14-0007/16 obtained and realized by Chemical Faculty of GUT with cooperation with WITOPLAST Sp.J.	2018	Co-I
3.	Conducting comprehensive research works to develop technology for fillings and fillings containing magnesium, vitamin D3 and collagen. Innovation voucher for small and medium enterprises. POIR.02.03.02-22-0010/18, obtained and realized by Chemical Faculty of GUT with cooperation with NORT Sp z o.o.	2018	Co-I

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Additional relevant information – (no more than 1600 characters)^v



- ⁱ You may select up to two disciplines out of 12 disciplines represented in the Doctoral School
- ⁱⁱ Observe the limit of not more than 2000 characters
- ⁱⁱⁱ Leave only one answer
- ^{iv} Select the role in the project: PI stands for principal investigator (refers to the holder of an independent grant and the lead researcher for the grant project), Co-I for co-investigator (Co-I assists the principal investigator in the management and leadership of the research project), R for researcher
- ^v Add any other relevant information e.g. awards for PhD students whom you supervised (no more than 1600 characters)