PhD Advisor form

Name of the advisor: Barbara Kościelska

Academic title: Ph.D., D. Sc., Eng.

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Discipline[i] materials engineering, physical sciences

Bibliometric indicators

1.	Number of journal publications in WoS/ Scopus	51/49
2.	Citations (WoS/Scopus) excluding self-citations	175/174
3.	Hirsch index (WoS/Scopus)	8/7
4.	Hirsch index in Google Scholar	8
5.	Citations in Google Scholar	269

1. The number of PhD students who have graduated under your supervision: 2
2. The number of PhD students currently supervised: 3
3. Are you currently accepting new PhD students:
   a. Polish Yes
   b. Foreign Yes

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

In recent years white phosphors and LEDs are proposed to be the next generation of solid state lighting sources, that should replace traditional incandescent and fluorescent lamps owing to their advantages in energy use and related environment benefits. The proposed research would consist in a glass-ceramics manufacturing, doped with rare earth ions, which could be used as a matrix for LED diodes. The glasses-ceramics should be transparent in a wide range of wavelengths and should be characterized by low energy of phonons as well as chemical resistance and mechanical strength. The luminescence intensity of the ions would be increased as a result of the plasmonic effect coming from the metal nanoparticles dispersed in the matrix or by the presence of fluoride nanocrystals in the matrix. The following research methods would be used in the research: XRD, SEM, TEM, DSC, XPS, UV-Vis spectroscopy and luminescence measurements.

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Funding or special equipment needed to carry out a PhD project [iii]:

1. Is funding available for experimental work: No
2. Is the equipment needed to complete a PhD project available in your lab/department: Yes

Most recent publications in WoS/SCOPUS journal – no more than 5 published after 1.01.2017

No	Authors/title/journal	Journal IF/Quartile – for WoS and SNIP/ CiteScore for SCOPUS	Publication year
1.	B. Kościelska, M. Walas, T. Lewandowski, M. Łapiński, M. Dębowski, A. Synak, A. Kłonkowski, W. Sadowski, I. Bylińska, W. Wiczk, Structural and luminescence investigation of GeO2-PbO-Bi2O3-SrF¬ 2 glasses doped with Eu3+, Tb3+ and Tm3+ ions, J. Non-Cryst. Solids 462 (2017) 41-46	2.488/Q2 (ME), SNIP 1.190/2.42	2017
2.	M. Walas, T. Lewandowski, A. Synak, M. Łapiński, W. Sadowski and B. Kościelska, Eu3+ doped tellurite glass ceramics containing SrF2 nanocrystals: preparation, structure and luminescence properties, Journal of Alloys and Compounds 696 (2017) 619-626	3.779/Q1 (ME), SNIP 1.403/3.66	2017
3.	M. Walas, P. Piotrowski, T. Lewandowski, A. Synak, M. Łapiński, W. Sadowski and B. Kościelska, Tailored white light emission in Eu3 +/Dy3+ doped tellurite glass phosphors containing Al3+ ions, Opt. Mater. 79 (2018) 280-295	2.320/Q2 (ME), SNIP 1.055/2.38	2018
4.	M. Łapiński, A. Synak, A. Gapska, P. Bojarski, W. Sadowski, B. Kościelska, New plasmonic platform for enhanced luminescence of Valrubicin, Opt. Mater. 83 (2018) 225-228	2.320/Q2 (ME), SNIP 1.055/2.38	2018
5.	A. Gapska, M. Łapiński, P. Syty, W. Sadowski, J. E. Sienkiewicz, B. Kościelska, Au-Si plasmonic platforms: synthesis, structure and FDTD simulation, Beilstein J. Nanotechnol. 9 (2018) 2599–2608	2.968/Q1 (PS), Q2 (ME), SNIP 1,233/ 3.32	2018

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

No	Project title, the name of the Princ. Investigator (PI) and the institution the project was carried out	Year awarded	Role in the project
1.	(Please fill in here)	(fill in)	Wybierz element.
2.	(Please fill in here)	(fill in)	Wybierz element.

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3.	(Please fill in here)	(fill in)	Wybierz element.

Additional relevant information – (no more than 1600 charters)[iv]

(Please fill in here)

[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 300 words
[iii] Leave only one answer
[iv] Add any other relevant information eg. awards for PHD students whom you supervised (no more than 200 words)