Research Grants for PhD students from the China Scholarship Council		
Information Form (please read the guidelines carefully on the website www-csc.utt.fr)		
Supervisor's	name : Ionescu Giv	en names : Elena Rodica
Status (prof., assistant prof.,): Associate Professor		
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Laboratory:	Laboratoire Lumière, nanomatériaux & nanotechnologies – L2n CNRS ERL 7004	Website address :
Institution:	Université de Technologie de Troyes	Website address :
Scientific com	petence of the supervisor:	
Biosensors, nanostructuration of solid supports, toxicity of nanoparticles and water pollutants using living cells		
Two major publications in the field proposed for the PhD:		
Sinawang, P.D., Rai V, Ionescu, R.E.; Marks, R.S. Electrochemical lateral flow immunosensor for detection and		
quantification of dengue NS1 protein, Biosensors and Bioelectronics, 77, 400-408 (2016).		
Brettanomyces bruxellensis yeast on nanostructured ultrafine glass supports, 203, 163956 (2020).		
Website address of the personal page : Supervisor's email : elena_rodica.ionescu@utt.fr		
Supervisor's email: elena_rodica.ionescu@utt.fr Description of the research work proposed for a PhD Topic # (see list): IV-2		
Title : Nanostructured biochips and beyond		
Subject:		
Previous work has focused on the ability of gold annealed nanoparticles formed on ultrafine glass substrates to optically detect different biological species: oligonucleotides and proteins. The PhD thesis will address several issues: surface regeneration, degradation of the active surface in the presence of biological buffers, understanding the mechanisms that govern the analytical performances of specific immuno- and genosensors. Different transduction (optical, acoustic and electrochemical) and characterization (AFM and SEM) techniques will be used.		
Keywords:		
biosensors, nanostructures, optics, biochemistry		
Expected collaborations :		
Background required from the applicant: The candidate should have a strong interest in experimental work and a solid experience in surface characterization		
techniques.		
Existence of a PDF file detailing the proposal ("yes" or "no"): (see guidelines on the website www-csc.utt.fr)		