



**SDI Review Form 1.6**

Journal Name:	<a href="#">Physical Science International Journal</a>
Manuscript Number:	2014_PSIJ_9676
Title of the Manuscript:	<b>Analytical investigation of electrons capture time effect on the threshold current density reduction in QD spin-lasers</b>
Type of the Article	

**General guideline for Peer Review process:**

This journal's peer review policy states that **NO** manuscript should be rejected only on the basis of '**lack of Novelty**', provided the manuscript is scientifically robust and technically sound.

To know the complete guideline for Peer Review process, reviewers are requested to visit this link:

(<http://www.sciencedomain.org/page.php?id=sdi-general-editorial-policy#Peer-Review-Guideline>)



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**PART 1: Review Comments**

	Reviewer's comment	Author's comment (if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)
<b>Compulsory</b> REVISION comments	Authors investigates "the effects of electron capture time and the polarisation of injected current on the threshold current density reduction and the normalised spin filtering interval of QD SSPL's, using numerical rate equations and show that the NFSI reduces as the electron capture time increases. It is also shown that the TC DR increases with reduction of electron capture time and increases in injected electron current polarisation. This increase in TCDR leads to lower power consumption and enhances the lasers dynamic performance.	This comment is exactly what we mean by our manuscript.
<b>Minor</b> REVISION comments	<p>a) The author should compare the results with those obtained from experiments</p> <p>b) There are so many misprints when writing manuscript, the author has to correct them.</p> <p>c)The author has to look at the highlighted areas on the manuscript and make revisions</p> <p>d) The author has to look also at the figure captions and bring out the corrections</p> <p>e) The authors should use a diagrammatic representation to show electron transfer between the wetting layer and the quantum dot and also various electron transfer processes taking place in the cavity</p> <p>f) The authors should point out the particularity of this work compared to ref. 21 and 22.</p>	<p>Experimental work in this field (ref. 21 and 22) is very different from what we done in this manuscript. They didn't calculate quantity that we obtained. Just for threshold current density reduction and the normalised spin filtering interval In ref. 22, just two data have been mentioned which one of them (<math>t_c(ps) = 0ps</math>) is in range of our calculation but our results justify reduction trend of those experiments results. Therefore, due to absence of enough experimental work and result data for this new field that we presented by our manuscript, part (a) don't perform. For part (b,c,d,e), we did it. About part (f), we note that the particularity of this work compared to ref. 21 and 22 contains</p> <ol style="list-style-type: none"> <li>1) Solving rate equations of QD lasers with time</li> <li>2) Simultaneously investigating the effects of</li> </ol>



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		<p>electron capture time and the polarisation of injected current on the threshold current density reduction and the normalised spin filtering interval.</p> <p>3) Simultaneously investigating the effects of levels occupancies probability by spin-up electrons in QD and negative helicity photon occupancies on spin-dependent optical gain</p> <p>4) Various numerical data tables</p>
<b><u>Optional/General</u></b> comments	The subject is interesting, English is well written, the work is well organised, the work has novel aspects but they are not well pointed.	According to your opinion, we edit our manuscript.