

Paper Submission Form - SAIP2025 Proceedings

Sections A, C, D, and E must be completed by all authors (including students) who submit papers. Section B is compulsory for students who submit manuscript(s).

Section A: Paper Submission Information

Paper/Abstract ID	383
Paper title	The effect of Ir on the magnetic and electronic properties of FePt alloy: A DFT Study
Corresponding Author Name & Surname:	Mashilo Matlala
Corresponding Author Email Address:	202002565@myturf.ul.ac.za

Section B: For Students & Supervisors

Supervisor Name & Surname:	MG Matshaba
Supervisor Email Address:	malili.matshaba@ul.ac.za

For this paper, the supervisor must agree/disagree with the following statements.

	Yes	No
1. I am aware that the above-mentioned paper is being submitted for possible publication in the Proceedings of the SAIP Conference. I am satisfied that the presented work is that of the listed authors. I hereby give consent to the submission	✓	
2. I have proof-read the manuscript	✓	
3. I am satisfied that the manuscript is written in appropriate English and is sufficiently free of grammatical and spelling errors	✓	
4. I am familiar with the required manuscript format ("House Style"), and I am satisfied that this manuscript meets the criteria. I am aware that manuscripts not conforming with House Style may be desk rejected	✓	
5. I am satisfied that the scientific content of this manuscript is of sufficient standard for it to be considered for publication in the Proceedings of the South African Institute of Physics Conference Proceedings	✓	

Student Name & Surname: Mashilo Matlala

Signature: 

Date: 31/07/2025

Supervisor Name & Surname: MG Matshaba

Signature: 

Date: 31/07/2025

Section C: Suggested Reviewers

Obtaining the two referee reports necessary for DHET subsidy is an onerous task.

Please provide the names and contact details of three qualified South African and/or international referees. Referees should have a PhD and expertise in the relevant area of Physics. Do not recommend referees who have co-authored a work with any of the authors on the manuscript within the past five (5) years. Manuscripts without three recommended referees may be subject to desk rejection.

Suggested Reviewers in your Research Field (Both local & international)

	Reviewer Names & Surname	Reviewer's Email Address(es)
Suggested reviewer #1	NL Lethole	nlethole.ufh.ac.za
Suggested reviewer #2	RE Mapasha	edwin.mapasha@up.ac.za
Suggested reviewer #3	M Molepo	mahlaga.molepo@wits.ac.za

Section D: Declaration of Novelty and Use of AI

How is this submitted manuscript scientifically novel?

We did not use AI at all. Since the novelty of this work is import we have generated DFT simulations of magnetic materials (FePt-based alloys) to start building a database for AI-driven materials discovery.

In this work we reported on the effect of Ir on the magnetic and electronic properties of FePt alloys. The study indicate that Ir does not improve the thermodynamics stability but enhances elastic properties of FePt alloy

Please see the [Author Guidelines for the AI use policy](#).

How was AI used in the generation of this manuscript?

AI was not used in this work

N/A

Section E: Plagiarism

	Yes
I am aware that plagiarism detection software may be used on my manuscript.	<input checked="" type="checkbox"/>