



Ain Shams University
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Green Chemistry Synthesis of Some Target Heterocyclic Systems of Expected Biological Activity

A Thesis Submitted for Ph.D. Degree in Chemistry

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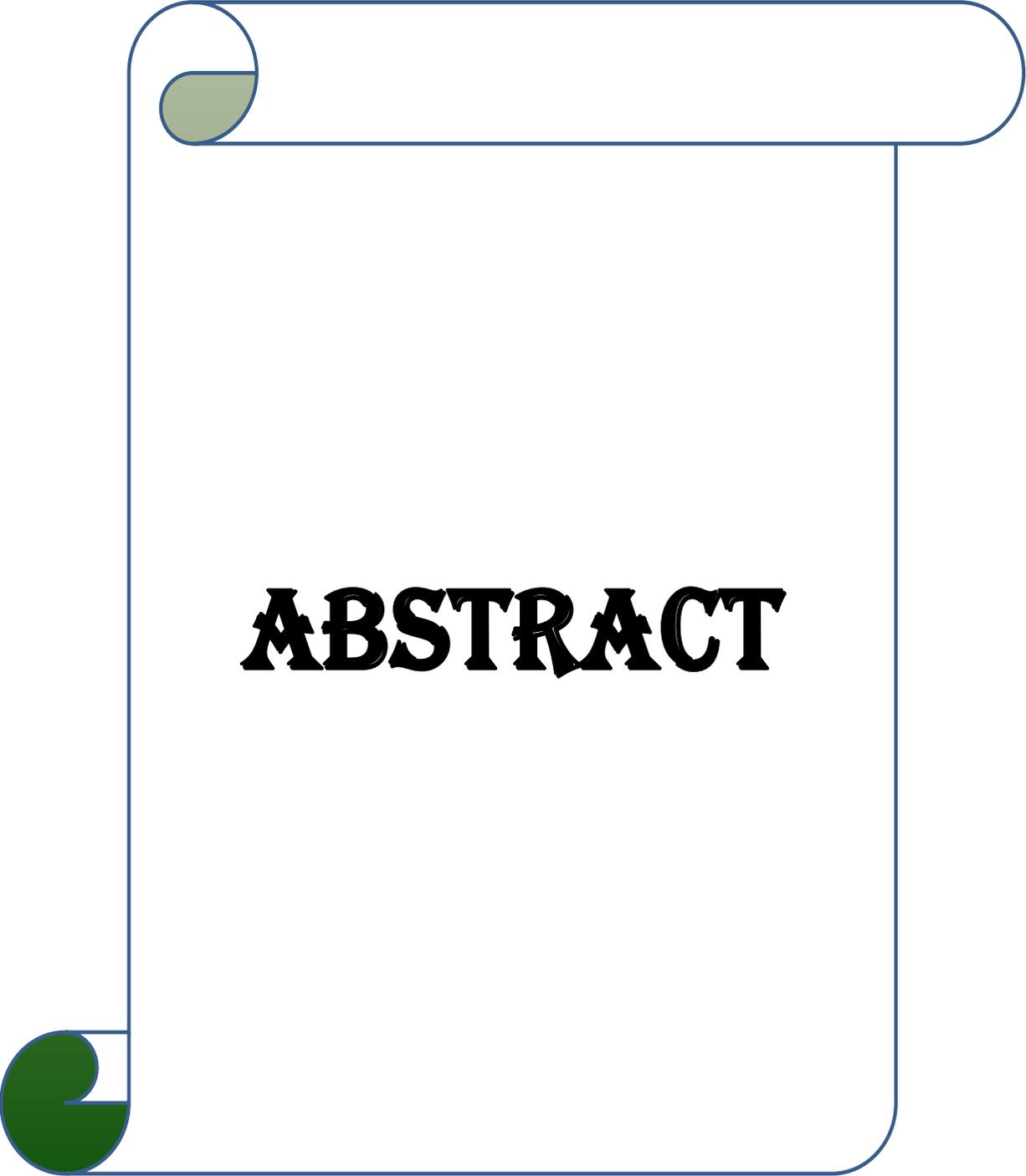
Aya Ibrahim Hassaballah

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ABSTRACT

Abstract
**Green Chemistry Synthesis of Some Target
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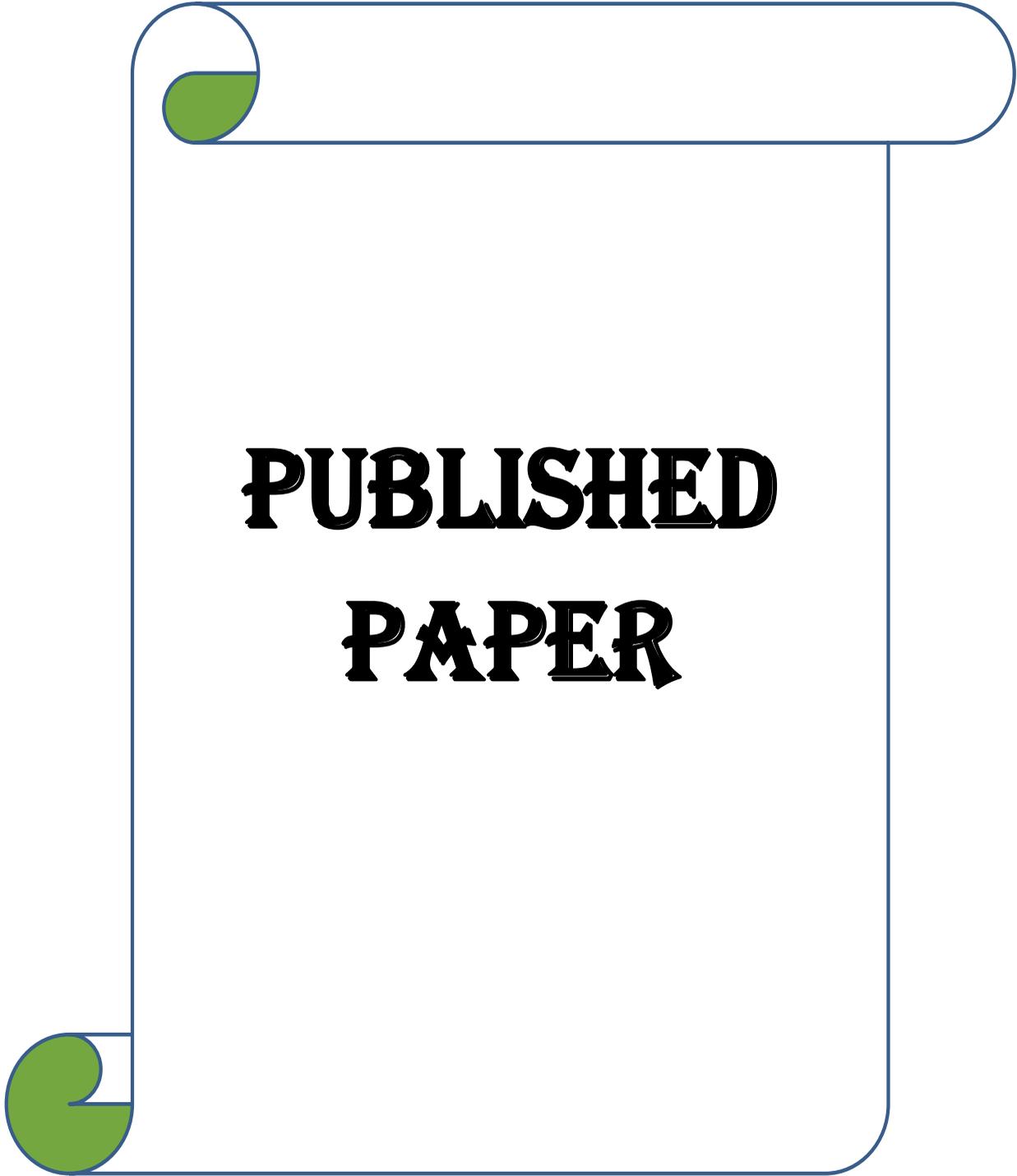
A comparative study on the synthesis of the target heterocyclic compounds under sustainable (grinding) and conventional (thermal) synthetic strategies was achieved. We observed that sustainable technique is much better than conventional thermal technique. It is High efficient, economic, environmentally benign, save time with highly atom economy, yield economy and reaction mass efficiency.

The following target heterocyclic systems were obtained

*Imidazoles;Thiazoles;Triazinethiones;Thiadiazine;
Thiazoles;Indazoles,Quinolines, Isoquinoline ester;
Quinazolines; Spiro-3-pyrroles; Spiro-1,2,4-triazinones*

Key Words:

Sustainable chemistry, green synthesis, grinding, green matrices, yield economy, multicomponent synthesis, one-pot step wise synthesis. insecticidal Activity and Antioxidants assays.



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Efficient Green Synthesis and Computational Chemical Study of Some Interesting Heterocyclic Derivatives as Insecticidal Agents

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Abstract

A series of 5,5-diarylhydantoin (Dilantin) **3**, **4**, and **7**, imidazole **1**, **2**, **5**, **6**, **8**, and **9**, thiazole **10–12**, triazinthione **13**, **15**, **16**, and **17**, and thiadiazine **14** derivatives,