



جامعة وهران للعلوم والتكنولوجيا

Implantation of electrons into the glass

Presented by:

Asmaa ZEBOUDJ & Saad HAMZAOI

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INTRODUCTION

Ionic implantation is among the techniques used to synthesize nanoparticles buried in a materials .This technique, therefore, consists in introducing a foreign species into material targets with a given energy. During its passage in the matter



OBJECTIVE

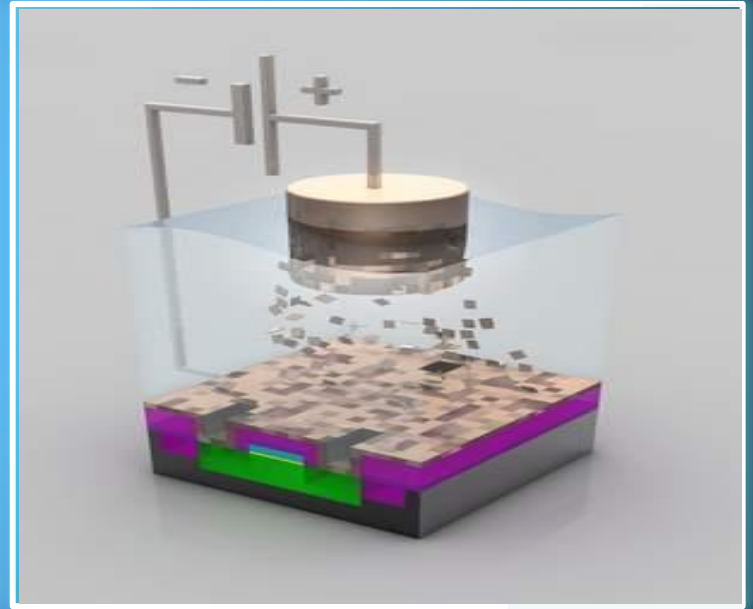
Production of more powerful and energetic electrons which since penetrated into the glass and causes spankers inside this material are damaged

03

Canon A electron design

Canon A electron design

The cannon is made in a tungsten -shaped v - shaped filament (cathode) in practice, you can use a tungsten filament, formed as a hairpin, The electrons are extracted from the filament and once out, these are attracted by the (positive) anode but meet the Wehnelt on the way.



04

RESULT

Result

The evaluation measures:
tension(V), current (C,) are
used to evaluate

the thermal current in
different function voltage
value then this current
shows the creation of
electron inside our sample
(glass)

V	C1	C2	C3	C'1	C'2	C'3	C _T
3055	611	608,3	0,12	619	610	25,3	25,18
5150	613	612	0,21	621	620	26,8	26,59
8085	614	610	2,24	623	620,7	29,85	27,61
10600	612	609	4,43	628	625	32,32	27,89

table 1 **current representation as a
different function of the voltage value**

Result

To evaluate the performance of the ionique current in the glass, the proposed approach was compared the value of the practical IC current is similar to proportional to the theory

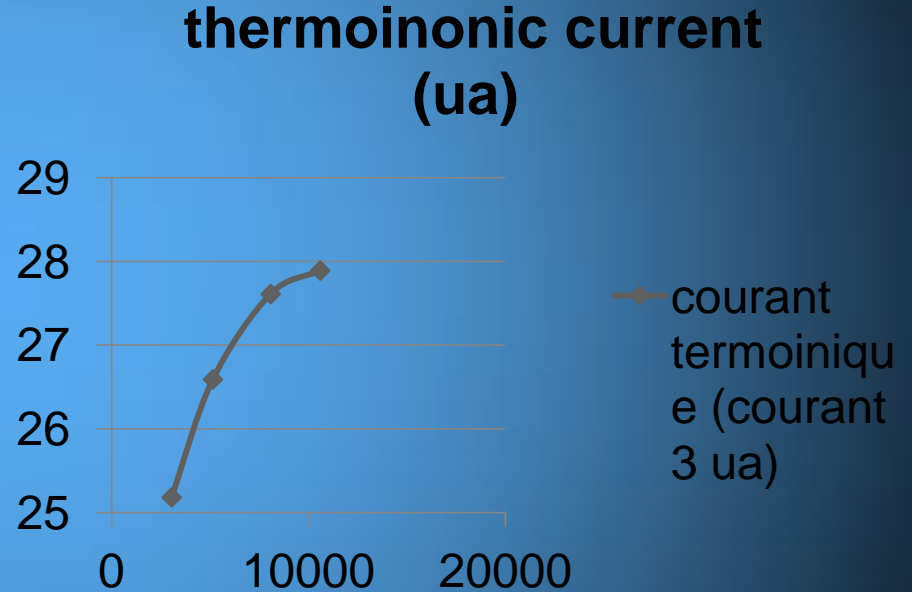


Figure 2. Experimental results

05

CONCLUSION AND PERSPECTIVES

CONCLUSION AND PERSPECTIVES

- creation of the electron has the interiors of glass use it in electron canon
- The proportionality of the current to the power $1/2$ of the applied voltage, established for flat electrodes was still valid for any field of form, as soon as the emission of electrons was intense enough for the phenomenon of the space load to be significant
- **Perspectives:**
 - Increase the voltage value;
 - Breakdown the glass and anoter materais.

Thank you