

Recent progress in advanced plasma-assisted thermochemical treatments of steels

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INTRODUCTION

A ... Al 316 ...
1,2 ... Al 316 ...
3 ...
4 ... Al 316 ...
5 ... Al ...
316 ...

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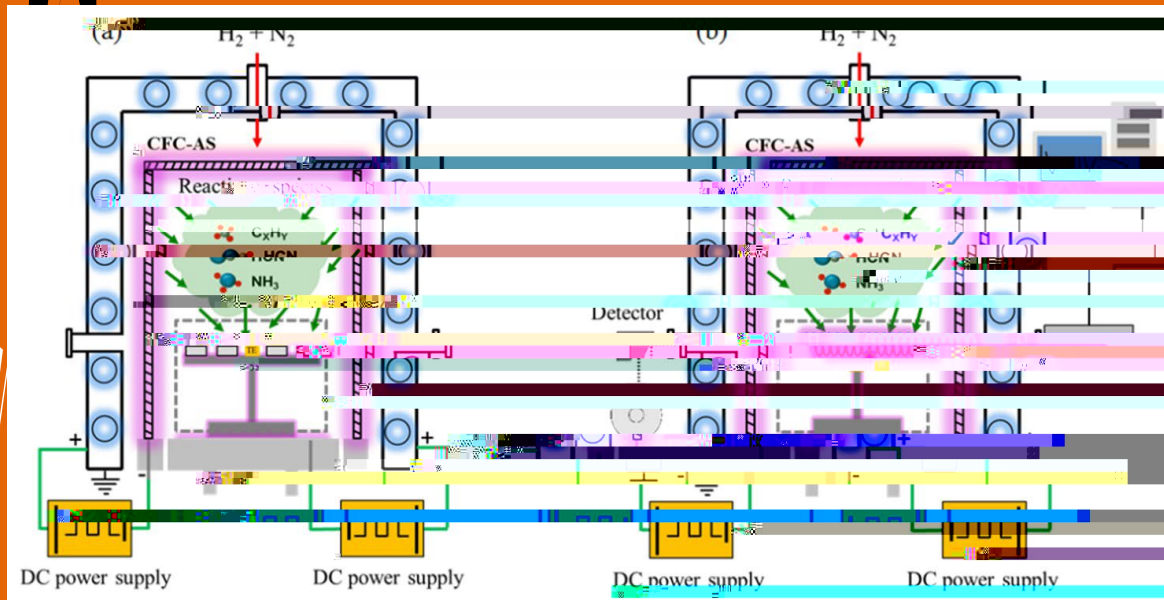


Fig.1

EXPERIMENTAL DETAILS

The reactor was made of Al 316 (1.4571) stainless steel with an inner diameter of 16 mm and a length of 10.3 cm. The reactor was packed with 0.03 g of catalyst (Pt 2.1, Pd 1.2, Au 0.2) supported on 20 mesh alumina (5 mm diameter).

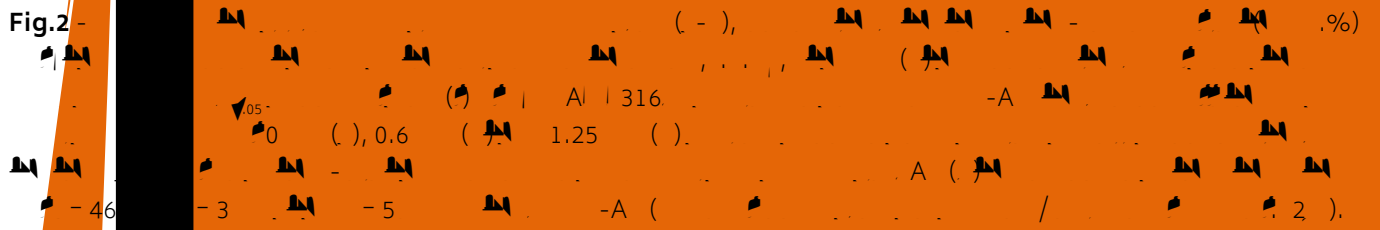
3
23,31 . A
- 0 (A - 6.6)
10¹⁵ -3,
Al | 316
(0.3
2) 410 4 0
1.5 - 440 . A
(3)
Al
(.4) 32
Al | 316
420
2
A
-A
Al | 316
A
(II)
()
0.4 03
(.05), 2 4.

RESULTS

Cold wall reactor with an active screen made of solid carbon

2 - A | Al | 316
0.6 1.25
2 . A
3
-A (A - 4.6)
- 1.25

Fig.2



Hot wall recombination coefficient with a plasma-activated carbon

4),
 (. . 2) . A
 μ (440
 (. . 4
 , 2)
) .

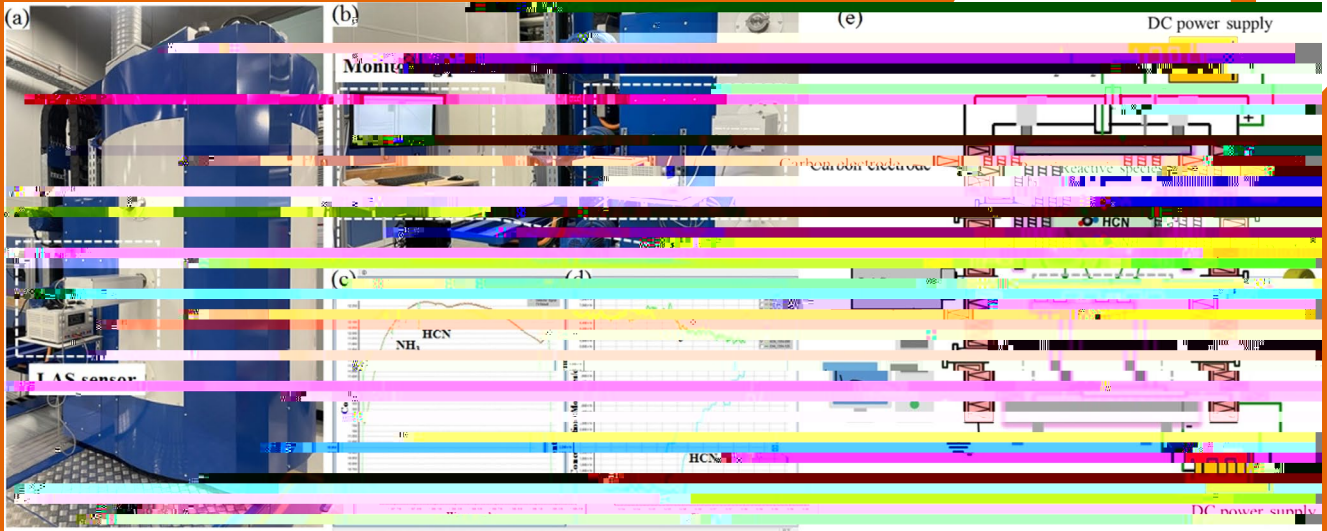


Fig.3 -

(,) ,
) ,
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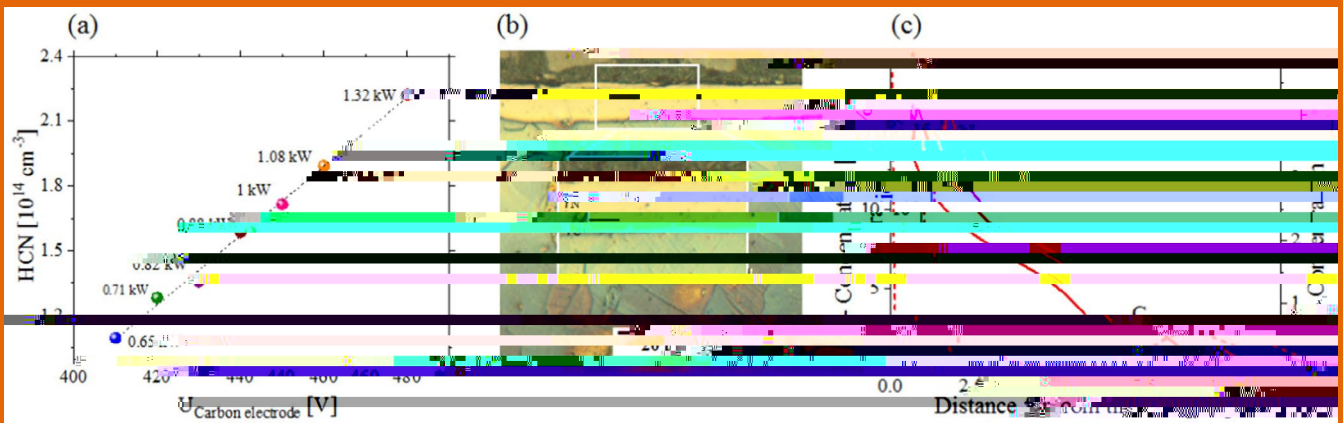


Fig.4 -

A
 () .
 () .
 Al | 316
 - 420 () ,
 - 440 , - 2.5 , - 2
 ()

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26 J, A, J, A, A 201 2(5) 254

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