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Fe, Ni, Cu, Al).

( , Pt, Au, Ag)

[1–4],

Pt, Ti, Fe

Al 1,74,

[1].

Al<sub>2</sub>O<sub>3</sub>,

Al-

[2, 6–9].

[6],

( -, - [12, 13],

[14]]

[10, 11]

[5, 6]

[9, 15].

[16].

Pt-  
17-19 Å,

[12].

[15].

Al Al- Al-

[5].

[5, 9].

[8].

Al- (Na ),

Al<sub>2</sub>O<sub>3</sub>, Al<sub>2</sub>O<sub>3</sub>

[8].

Al<sub>2</sub>O<sub>3</sub>

[6, 7, 17-19].

Al-

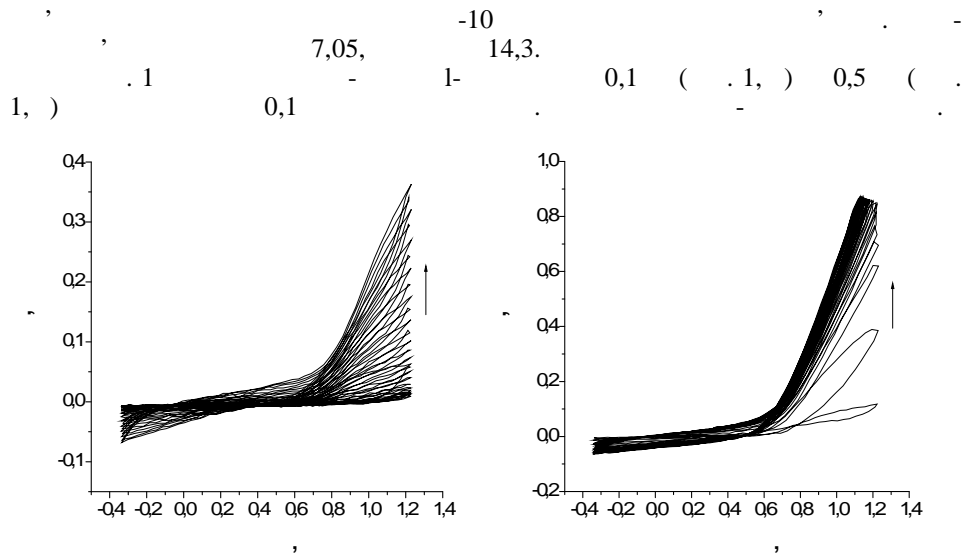
Cl<sup>-</sup>

( 0,1 ) ( ) Al-

Al-

-0,4-1,2

50, 100  
[20, 21].  
A4 TECH



.1. - 1- 0,1 ( ) 0,5 ( ) 100 / . 0,1

1,2 Al- ( . 1, , ).

=1,2 , ≈ 0,9

0,5 .

1,2 . 2

2, . 2

0,1

0,1 0,25

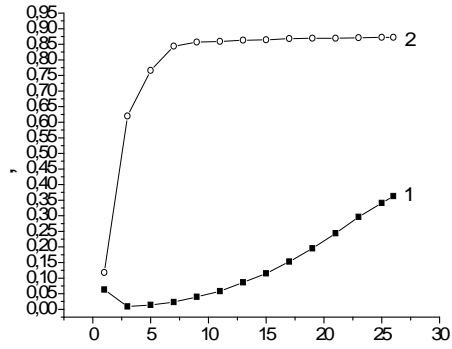
. 3, - 1- 0,5 0,1

“ ” (≈20)

( . . 1, ) (

).

[2]. ( . . 1, )



.2. 1- (1)0,1 (2)0,5 . 100 / .

(v)

0,1

	v=50 /		v=100 /		v=150 /	
0,1	0,65	1,26	0,65	1,23	0,65	1,23
0,25	0,65	1,24	0,65	1,23	0,65	1,23
0,5	0,65	1,23	0,65	1,22	0,65	1,23

= 0,65 .

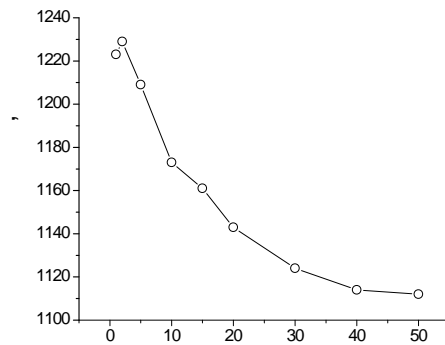
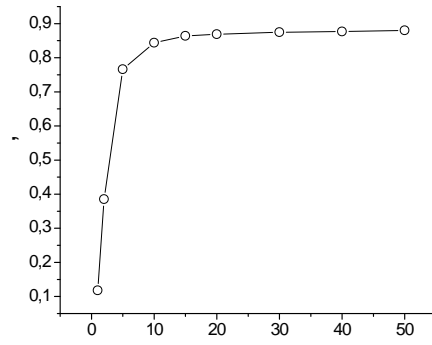
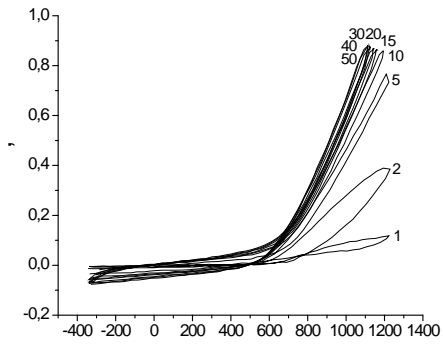
1,2 .

Al-

( ), - , [21, 22].

( )

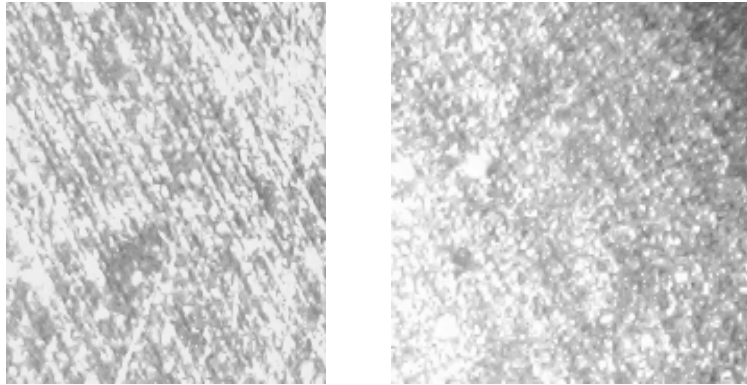
( )



.3. - 1- 0,5 0,1 ( ) ( ) ( ).  
100 / .

:  $Al_2O_3$  , -  
( ) ( . .4).

[24].



.4. Al- : - ( )  
 ); - 100 / . 100,8 0,1 .

[22].

NaCl, Al-

Cl<sup>-</sup> 3% ( -

),

[21-23].

- ( )

Al

-

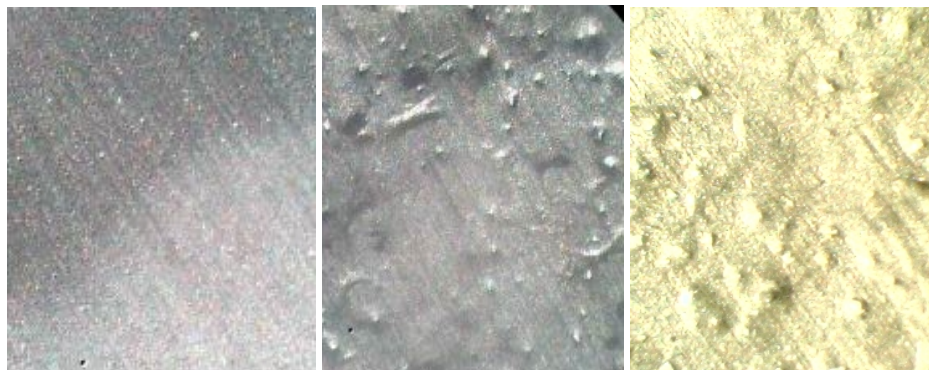
, .5,

0,1

[22].

70-75 %,

[22].



0,5 .5. : - Al- ; - NaCl. 100,8 ;

-

• (0,5 ) 0,1 -

• ;

• ;

• ;

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**SUMMARY**

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**POTENTIODYNAMIC ELECTROCHEMICAL SYNTHESIS OF POLYPYRROLE LAYERS ON THE SURFACE OF THE ALUMINIUM SUBSTRATES**

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The electrochemical synthesis of polypyrrole under the potentiodynamic regime on the surface of unprepared aluminium electrode in the aqueous solutions of citric acid has been carried out. The effect of synthesis conditions, namely pyrrole concentration and potential scanning rate, on the quality of produced polymeric films was studied. It was determined that synthesized polypyrrole films displays high plasticity and adhesion to the surface of aluminium electrode.

Key words: potentiodynamic synthesis, polypyrrole, aluminium electrode.

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