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In the work are presented results calculation different design disperse structures, in which disperse faction placed, in dielectric matrix, presents itself microparticles, the surface of which is covered by metallic coating. Such artificial material can be used as absorbers electro-magnetic energy.

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[1, 2].

- :  
 - j<sub>m</sub>(y),  
 ;  
 - - h<sub>m</sub><sup>(2)</sup>(y),  
 ( , , [3]):

$$h_m^{(2)}(y) \sim (i^{m+1}/y) \times e^{-iy};$$

- .  
 . y = √v × k × r, k -  
 , v - , r -

- , -  
 } « », -  
 u Δr, . . :  
 } » u Δr (1)

$$\dagger = (4f / ^2) \times \text{ReS}(\nu = 0) \quad (2)$$

.( S(ν) )-

).

(1)

(2)

:

$$\tau = (32f^2/3) \times (\dots) \times \text{Im}(r_p + r_m) \times \tau_0, \quad (3)$$

$$\tau_0 = f^2/4, r_p = r_m - \dots, \quad (4)$$

$$\text{Im} r_p = (9f/4) \times (\dots) \times (\dots / \Delta r), \quad (4)$$

$$\text{Im} r_m = (9/16f) \times (u^2 / \dots \times \Delta r). \quad (5)$$

$$10^{17} \dots^{-1}, u \sim 1$$

$$\sim \Delta r \sim 1$$

$$\sim 10, \Delta r \sim 0,1$$

$$(\dots (5)),$$

[4].

d

$$W_0 \times \tau \times N \times d = W_0,$$

$$d = (\dots / 2f) \times (u^2 / a \times \Delta r)$$

N -

$$, W_0 = (\dots / 8f) \times \dots^2 -$$

$$: \tau \sim 10^{17} \dots^{-1}, \Delta r \sim 0,5,$$

$N \cdot 10^{12} \text{ }^{-3}, d \text{ (3 - 5) ,}$

: **1.** *A.L. Aden, M.S. Kerker.* Scattering of electro-magnetic waves from two concentric spheres // *J.Appl.Phys.* - 1951. -T. 2. - 10, - C. 1242 - 1246. **2.** *K. . . . .* // . . . . . - 1952. - 2. - 15 - 21. **3.** . . . . . - .- .: « . . . . . », 1990.- 456 c. **4.** . . . . . , . . . . . - // . . . . . - 1988. - 9. - C. 1415 - 1466.

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The article is devoted to research of process of receipt of the structured melamineformaldehyde resin. By the method of infra-red spectroscopy the structural changes which take place in resin on the basic stages of receipt is detected. Influence of plasticizer on the structure of melamineformaldehyde resin is explored.

[1, 2]