

New nitric oxide-carrier systems based on an amphiphilic copolymer of *N*-vinylpyrrolidone with triethylene glycol dimethacrylate

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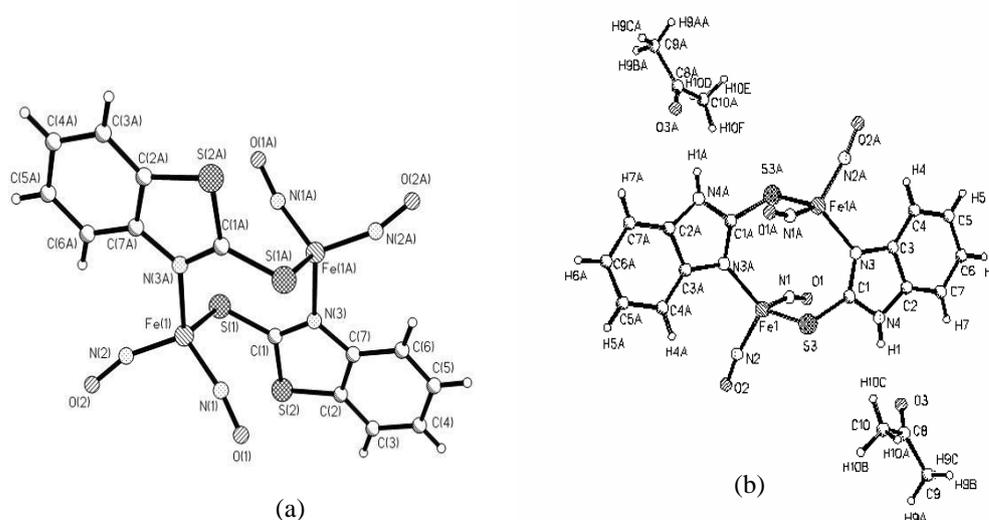


Figure S1 Molecular structures of **BTz** (a) и **BIm** (b) complexes (see refs. 3 and 23 in the manuscript, respectively).

Table S1 Experiments conditions on **BTz** encapsulation, its content per (co)polymer and in solution, and optical density D of absorption band at $\lambda_{\max} = 434$ nm.

| Test no. | [The (co)polymer] in Pr ⁱ OH, mg ml ⁻¹ | [BTz] ₀ in benzene, mg ml ⁻¹ | Volume solution ratio, ml | The BTz content per the copolymer, wt% | [BTz] in solution, mg ml ⁻¹ or M | D^a |
|----------------|--|--|---------------------------|---|--|-------|
| 1 | 1 | 1 | 4:0.10 | 2.5 | 0.024/0.43×10 ⁻⁴ | 0.25 |
| 2 | 1 | 1 | 4:0.30 | 7.5 | 0.07/1.2×10 ⁻⁴ | 0.61 |
| 3 | 1 | 1 | 4:0.50 | 12.5 | 0.11/2.0×10 ⁻⁴ | 0.92 |
| 4 | 1 | 1 | 4:0.30 | 7.5 | 0.07/1.2×10 ⁻⁴ | 0.61 |
| 5 ^b | 1.3 | 1 | 4:0.17 | 4.3 | 0.04/0.73×10 ⁻⁴ | 0.49 |

^athe value D of absorption band was 0.31 at **BTz** concentration of in benzene equal 0.032 mg ml⁻¹.

^b linear PVP was used in this test.

Table S2 The conditions of experiments on **BIm** encapsulated in PrⁱOH, the content of **BIm** per the copolymer and in the solution and optical density D of absorption band at $\lambda_{\max} = 437$ nm.

| Test no. | [The (co)polymer] ₀ in Pr ⁱ OH, mg ml ⁻¹ | [BIm] ₀ in benzene, mg ml ⁻¹ | Volume solution ratio, ml | The BIm content per the copolymer, wt% | [BIm] in solution, mg ml ⁻¹ or M | D |
|----------|---|---|---------------------------|---|--|------|
| 6 | 1 | 1 | 4:0.1 | 2.5 | $0.024/0.37 \times 10^{-4}$ | 0.32 |
| 7 | 1 | 1 | 4:0.3 | 7.5 | $0.07/1.1 \times 10^{-4}$ | 0.74 |
| 8 | 1 | 1 | 4:0.5 | 12.5 | $0.11/1.7 \times 10^{-4}$ | 1.15 |
| 9 | 1 | 1 | 4:0.5 | 12.5 | $0.11/1.7 \times 10^{-4}$ | 1.15 |

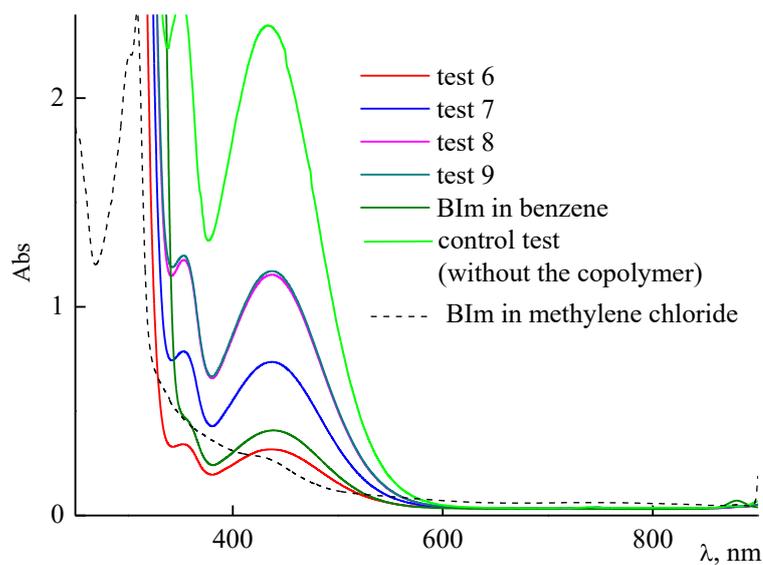


Figure S2 The absorption spectra of **BIm** in benzene and in tests 6-9 (the solvent is PrⁱOH). The dashed curve corresponds to the **BIm** spectrum in methylene chloride, the cuvette is 0.2 cm.

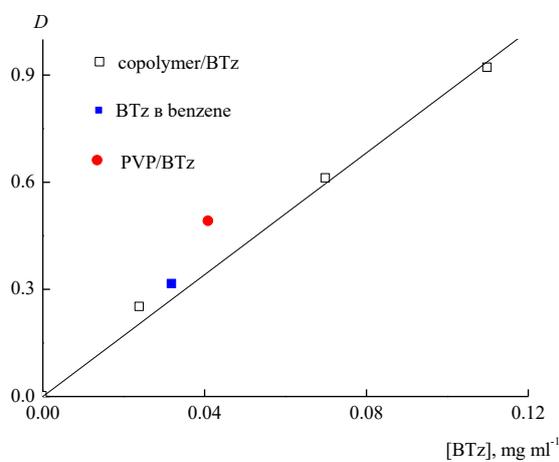
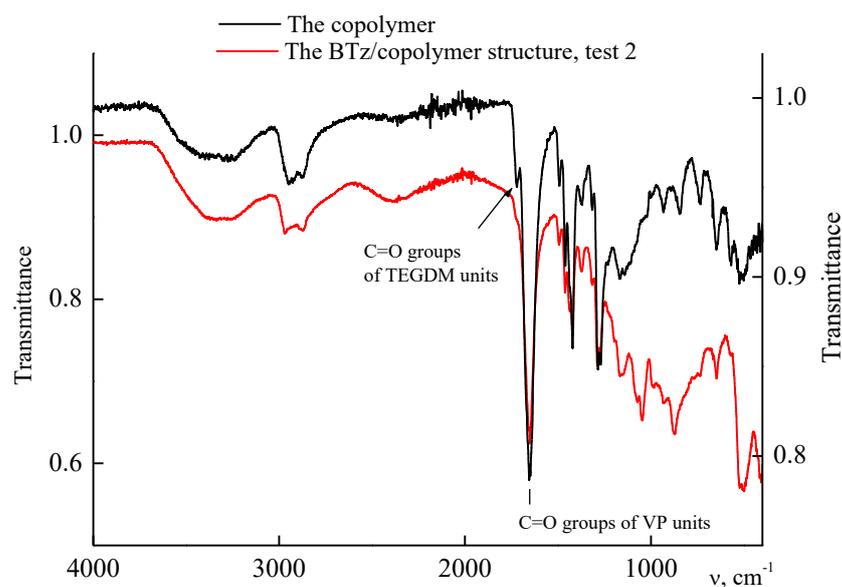
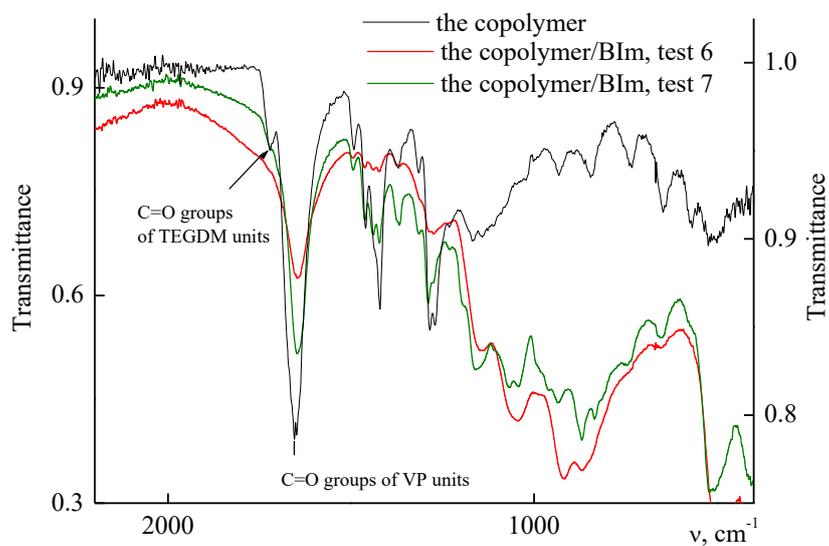


Figure S3 The dependence of D (**[BTz]**) in PrⁱOH in the presence of the copolymer. The points correspond with **BTz** solution in benzene and in PrⁱOH in the presence of PVP.



(a)



(b)

Figure S4 (a) FTIR spectra of the copolymer and the copolymer/**BTz** hybrid structure (test 2) isolated from buffer solution, (b) FTIR spectra of copolymer and copolymer/**BIm** hybrid structure (tests 6 and 7) isolated from buffer solution.

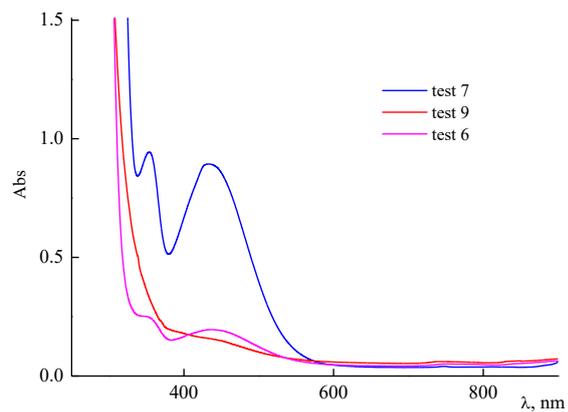


Figure S5 The absorption spectra of the copolymer **1/BIm** prepared in tests 6, 7, 9 in aqueous buffer solutions.

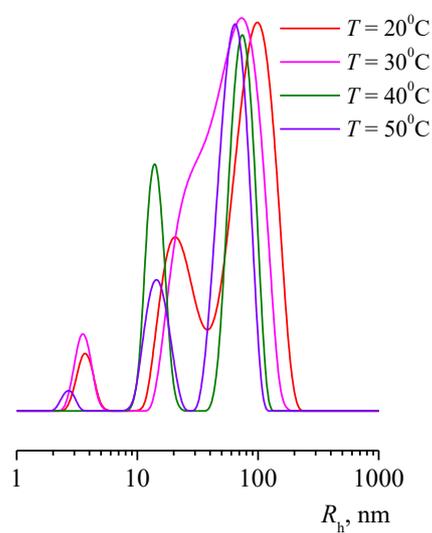


Figure S6 The curves of the light scattering intensity distribution on the copolymer/**BIm** particle sizes in water buffer solution at various temperatures.