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Supplementary Materials

Preparation and Characterization of Sulphur-impregnated Natural Zeolite Clinoptilolite for Hg(II) Removal from Aqueous Solutions

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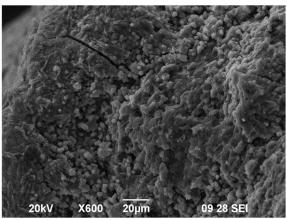


Figure S1. SEM secondary electron image of SZ at magnification of 600 ×.

Distribution of Hg(II) species as a function of pH is calculated on the basis of the constants presented in Equations (1) - (3) [1] and illustrated in Figure S2.

$$Hg^{2+} + H_2O \rightleftharpoons HgOH^+ + H^+ \qquad pK_1=3.40$$
 (1)

$$Hg^{2+} + 2H_2O \rightleftharpoons Hg(OH)_2 + 2H^+$$
 pK₂=5.98 (2)

$$Hg^{2+} + 3H_2O \rightleftharpoons Hg(OH)_3^- + 3H^+ pK_3=21.1$$
 (3)

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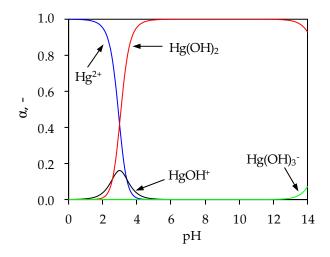


Figure S2. Distribution of Hg(II) species as a function of pH.

References

1. Nazarenko, V.A.; Antonovich, V.P.; Nevskaja, E.M. Metal ions hydrolysis in dilute solutions, Atomizad, Moscow, 1979, pp. 34-47.