**Response to Reviewers**

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| **Reviewer A’s comment** | **Authors’ response** |
| This is a significant study of particular type of solvents: eutectic mixtures based on choline chloride, with promising role in research and industry as a room-temperature alternative for molten salts. The authors provided a range of quantitative values, in form of graphs and tables, of important physicochemical properties of several such solvents, and discussed the data in terms of intermolecular forces. | We are thankful to the Reviewer for all useful recommendations. Reviewer A: All amendments are blue colored. |
| 1. Abstract Line 17, the abbreviation DES appears for the first time and should be given by full name | We accepted this suggestion and corrected the sentence as (page 1): “This paper reports the physical (density, dynamic viscosity, electrical conductivity and refractive index) and thermodynamic (thermal expansion coefficient, molecular volume, lattice energy and heat capacity) properties of choline chloride (ChCl):propylene glycol, ChCl:1,3-dimethylurea and ChCl:thiourea deep eutectic solvents (DESs) (1:2 molar ratio) at atmospheric pressure as a function of temperature over the range of 293.15-363.15 K.” |
| Line 26 (and line 477):  It is unclear what of properties are inferior? | We accepted this suggestion and corrected the sentences on pages 1 and 16.Page 1: “However, the properties (density, viscosity and electrical conductivity) of ChCl:1,3-dimethylurea and ChCl:thiourea DESs were inferior to those of the ChCl:urea DES.”Page 16: “However, the properties (density, viscosity and electrical conductivity) of the ChCl:1,3-dimethylurea and ChCl:thiourea DESs are inferior compared to those of the ChCl:urea DES, but they can be used in processes at temperatures above 313.15 K.” |
| 2. Lines 33, 34:  First clause : Having very low volatility and being less toxic than organic solvents, ionic liquids (ILs) are  very promising for their replacement “  should be rewritten to read :  Having very low volatility and being less toxic, ionic liquids (ILs) are  very convenient to replace organic solvents | We accepted this suggestion and corrected the sentence as (page 2):“Having highly low volatility and being less toxic, ionic liquids (ILs) are very convenient to replace organic solvents.” |
| 3. Lines 33 and 38:   Reduce or eliminate the contradictories between the first (…being less toxic..)  and the forth clause  (..some ILs possess high toxicity..) | We accepted this suggestion and corrected the sentence as (page 2):“However, since some ILs are still toxic,6,7 their use in drug- and food-related products is unacceptable.” |
| 4. Line 73: electrochemical devices…  better:   electrochemical experiments, or electrochemical cells | We accepted this suggestion and corrected the sentence as (page 3): “Knowing the electrical conductivity (*κ*) of a DES is of great value if it will be used as a supporting electrolyte in electrochemical experiments.” |
| 5. Line 118, 119: in ”.. physicochemical and electrochemical properties…”  omit “electrochemical”,  since conductivity  may not be called  electrochemical property | We accepted this suggestion and corrected the sentence as (page 4): “*Physicochemical properties of DESs*All physicochemical properties were measured in the temperature range between 293.15 and 363.15 K at the atmospheric pressure.” |
| 6. Fig’s 1  a,b,c,d,  consume too much space, since the ordinate is unnecessary expanded above  1300. | We accepted this suggestion and uploaded the Corrected Fig. 1. (Page 5). |
| 7. Line 139-141  In the sentence “The present results showed that the density decreases with increasing the temperature due to the increase of the kinetic energy of the molecules, which become more mobile and with a  larger average distance, thus decreasing the density”. Remove as trivial “due to the increase of the kinetic energy of the molecules, which become more mobile and with a larger average distance, thus decreasing the density.”   Instead introduce: “ as usual for liquids” | We accepted this suggestion and corrected the sentence as (page 5): “The present results showed that the density decreases with increasing the temperature, as usual for liquids.” |
| 8. Lines 278 -283:  The authors should state more clearly which  behavior are compared and are  advantageous  relative to  of ChCl:1,3-dimethylurea and ChCl:thiourea DESs | We accepted this suggestion and introduced the sentence as (page 10): “On the other hand, since the density and viscosity of ChCl:1,3-dimethylurea and ChCl:thiourea DESs are higher than those of the ChCl:urea DES at low temperatures, these two DESs can be used in technological processes at temperatures above 313.15 K. |
| 9. Line 346,  before : The log….,    introduce the statement:  For glass forming molten  zinc chloride equation (13) was found to be valid within a broad range (four order of magnitude) of conductivities and viscosities, with the constant alpha of rougly 0.8  [Susic et al, J Chem.Phys., 62(1975) 744]. | We accepted this suggestion and introduced the sentence as (page 13): “For glass forming molten zinc chloride, equation (13) was found to be valid within a broad range (four orders of magnitude) of conductivities and viscosities, with the constant *α`* of roughly 0.8.50”. New reference is added as M. V. Šušić, S. V. Mentus, J*. Chem. Phys*. **62** (1975) 744.Since new reference is introduced, the corresponding numbers of latter references are changed in both Paper (pages 14, 15, 20) and Supplementary Material (pages 3, 4), written in blue.  |

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| **Reviewer B’s comment** | **Authors’ response** |
| This manuscript reports the physical (density, dynamic viscosity, electrical conductivity and refractive index) and thermodynamic properties (thermal expansion coefficient, molecular volume, lattice energy and heat capacity) of the Choline chloride-based DESs. The results presented in this paper are importance for the ChCl-based DESs. After minor revision, I suggest that the paper is accepted in this form. | We are thankful to the Reviewer for very positive attitude against our paper.Reviewer B: All amendments are red colored. |
| 1. Three of the six studied compounds are listed in the abstract, and should be added to the other | We accepted this suggestion and corrected the sentence as (page 1): “Their properties were also compared with those of some already characterized ChCl-based DESs, namely ChCl:ethylene glycol, ChCl:glycerol and ChCl:urea (1:2 molar ratio).” This part of abstract in Serbian is also changed (page 17). |
| 2. Keywords should be changed according to the instructions for writing a paper in this journal. | We accepted this suggestion and corrected the keywords as (page 1): “Characterization, Eutectic, Solvent, Glycols, Amides”. |