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Content

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AC electric conductivity of untreated and mentally treated electrolyte aqueous solutions

In a previous study ac electric conductivity was performed on aqueous solutions of several ionic salts by considering topoenergetic working principles in view to evidence the effect of local tap water and the location of performing the measurements on structuring process [1]. On the other hand, recent series of studies on freezing process of water clearly revealed the mental field as its main driving potential [2]. In this way, study of ac electric conductivity on initial and mentally treated electrolyte aqueous solutions represents a natural result.

Experimental details: Saturated solution of crystalline Na2CO3.10H2O (1.080 g/mL) and nearly saturated anhydrous Na2CO3 (1.132 g/ mL) at 22 ± 2 ^{0}C were considered by using freshly boiled and quenched tap water as solvent. Procedure for ac electric conductivity was previously described [1]. Measurements at frequencies f: 100, 120, 1000 and 10,000 Hz were performed at the same temperature on successively diluted solutions with the coefficient 0.75 and saturated solutions are considered as having unity (1) concentration in arbitrary units (a.u.).

The mental treatment was applied by using the mental antenna recently described [2] and without special training and mental preparation before. The free end of it was immersed in the solution under test during the measurements. It is important to mention that all measurements were performed in the same place as the water freezing experiments [2], namely me as the operator being isolated in an area of approximately 200 m in diameter.

Finally, there were four series of measurements to be compared in view to reveal differences between them, namely as described in the following Table 1:

Table 1

symbols used for simplicity	solutions
anh	Na2CO3anhydrous
CRST	Na2CO3.10H2O
anh-MT	Na2CO3anhydrous – Mentally Treated
CRST-MT	Na2CO3.10H2O – Mentally Treated

Results: Figures 1-4 show some results for R and C as a function of [solute] which are similar with the previous results obtained for other electrolyte aqueous solutions [1].Figures 5-14 shows the variations of phylogenic parameters (N, M, fo, -M/N, -N^2/M) from Universal representation of R and C as a function of frequency. It can observe at once that C is a more sensitive response eigenvalue at solute nature and MT than R. I have considered anhydrous and crystalline forms of Na2CO3 taking into account the differences of solutions structure. This can be observed also in the density values. I have chosen the bellow saturation solution of anhydrous species in view to avoid crystallization. However, it has a bigger density than crystalline species due by a compact and crosslinked structure. I have expected that anh solutions have less mobility of dipoles than CRST solutions.

Figures 15 and 16 show the variation of f*R*C = f/fp on [solute] [1] at 100 Hz and 10 kHz. fp = 1/(R*C) is the proper frequency of dipoles and the ratio f/fp is always under unity because fp > f. The above assumption can be substantiated by the following order of the solutions for this ratio:

100 Hz : anh-MT ≥ CRST-MT > CRST > anh (1)
10 kHz: anh > anh-MT ≥ CRST > CRST-MT.

Phylogenic parameters (M, -M/N, -N^2/M) have a sigmoidal variation on [solute] and they show distinct differences between the four solution series in the range of [solute]: 0.1-0.6 a.u., namely:

M ~ LN(Ctr): CRST-MT > anh-MT > CRST ≥ anh (2)
-M/N ~ LN(ctr): anh > CRST ≥ anh-MT > CRST-MT
-N^2/M ~ CS: anh > CRST ≥ anh-MT > CRST-MT.

These relationships are also substantiated by the values in Table 2.

Table 2. Estimation of phylogenic parameters, y, for x =[solute] = 0.3.
LN(C) = N*LN(f – fo) + M and y = (a+b*x)/(c+x) (correlation coefficients have values over 0.995 for all parameters y).

y	anh	CRST	anh - MT	CRST - MT
M	11.5 ± 0.2	12.3 ± 0.9	12.5 ± 0.3	13.2 ± 0.3
-M/N	23.80 ± 0.09	21.5 ± 0.1	21.46 ± 0.06	19.9 ± 0.1
-N^2/M	-(0.021 ± 0.002)	-(0.026 ± 0.003)	-(0.028 ± 0.003)	-(0.330 ± 0.005)

Conclusions:

1. Clear structural differences have been observed between untreated and mentally treated electrolyte aqueous solutions.
2. Mentally treated solutions have bigger dipole density with smaller volume/mass and coupling strength than untreated solutions.
3. Anh solutions have a crosslinked structure with smallest dipole density, biggest volume/mass and coupling strength of them with the inert lattice explaining fastest reaction at low frequency and lowest reaction at high frequency.

References

[1] Gh. Dragan, Topoenergetic aspects of water structuring as revealed by ac electric conductivity, GDF Databanks Bull., 15(3), 2011.
[2] Gh. Dragan, DTA study of water freezing. V. Effect of a mental antenna, GDF Databanks Bull., 17(2), 2013.

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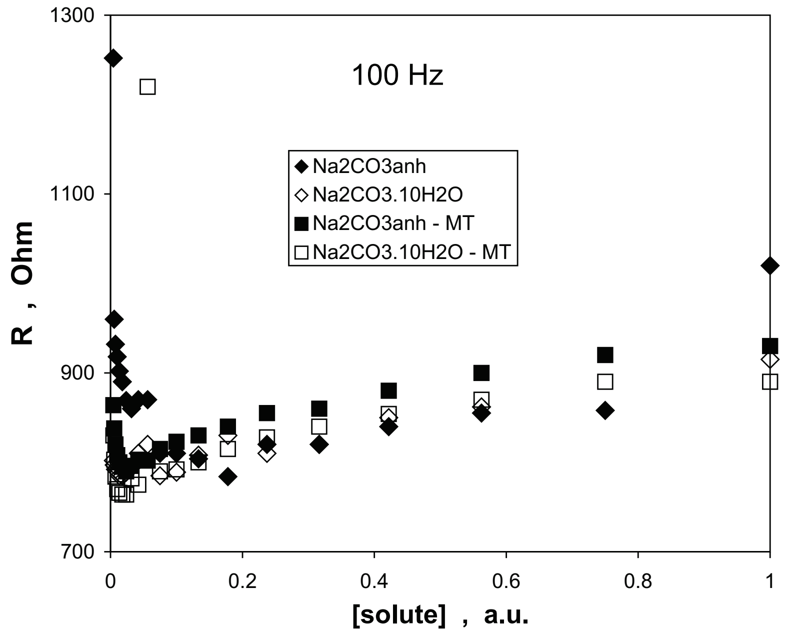
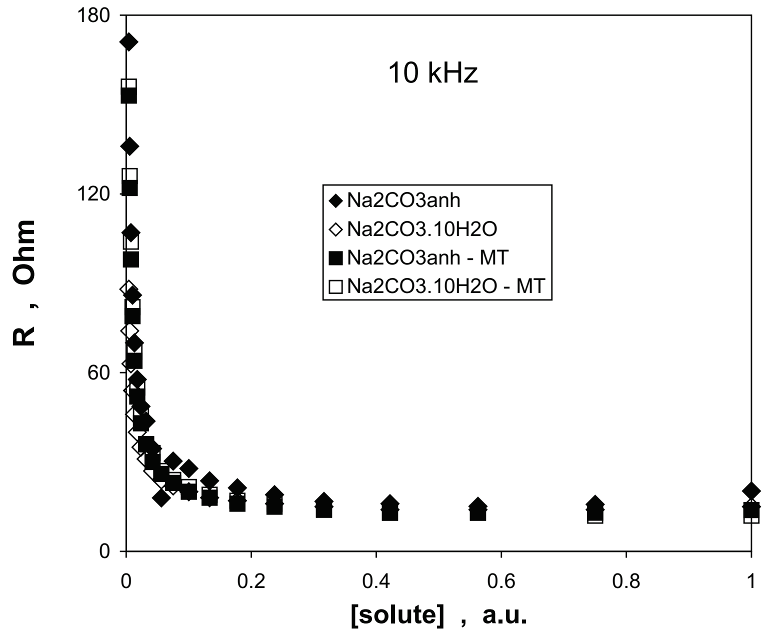


Figure 1.



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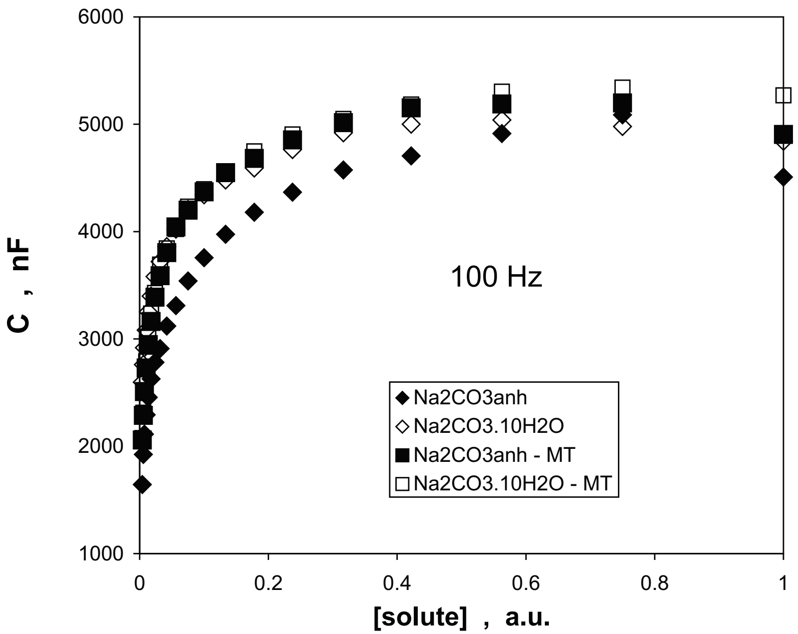

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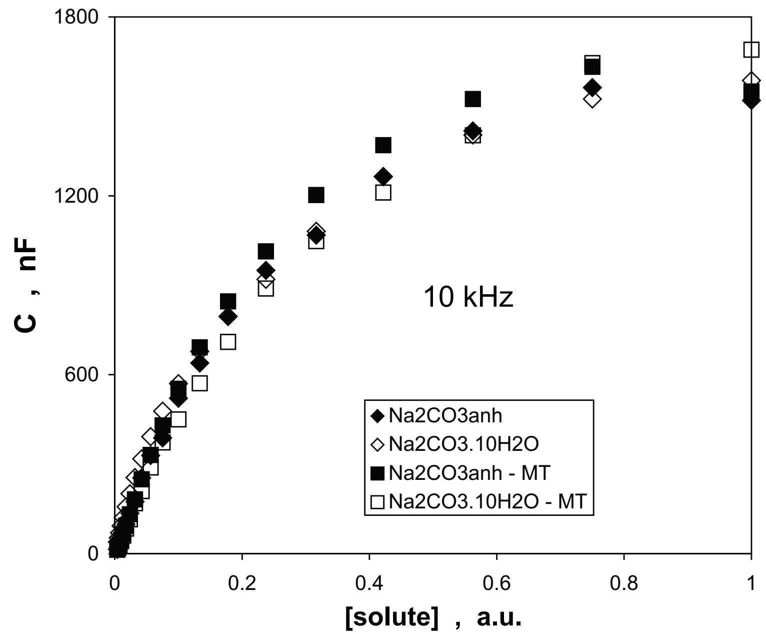

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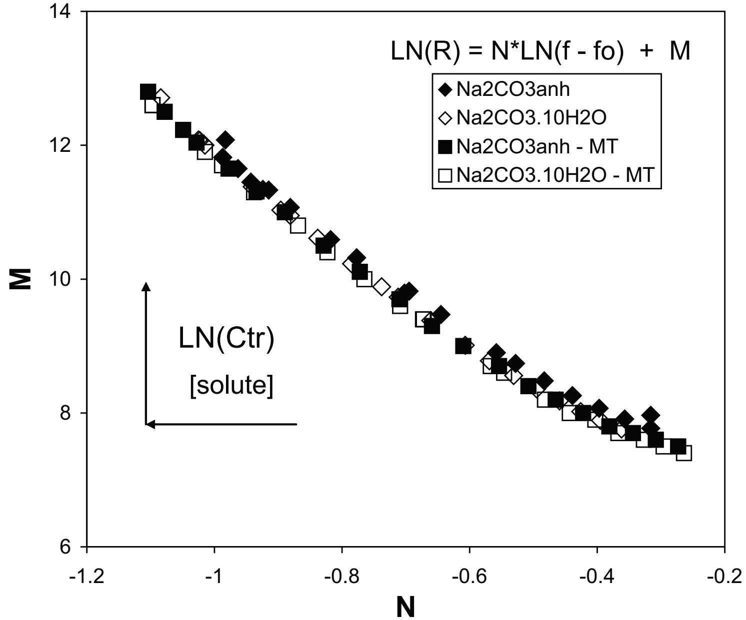

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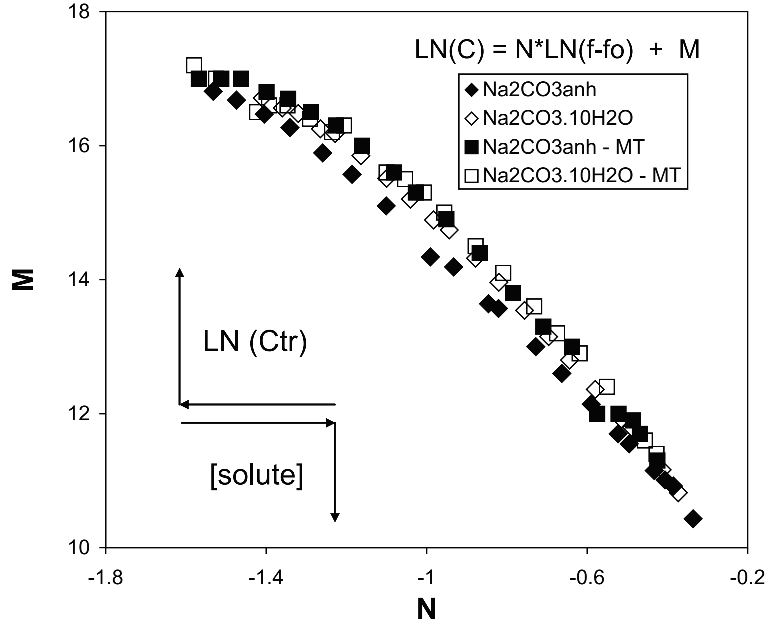

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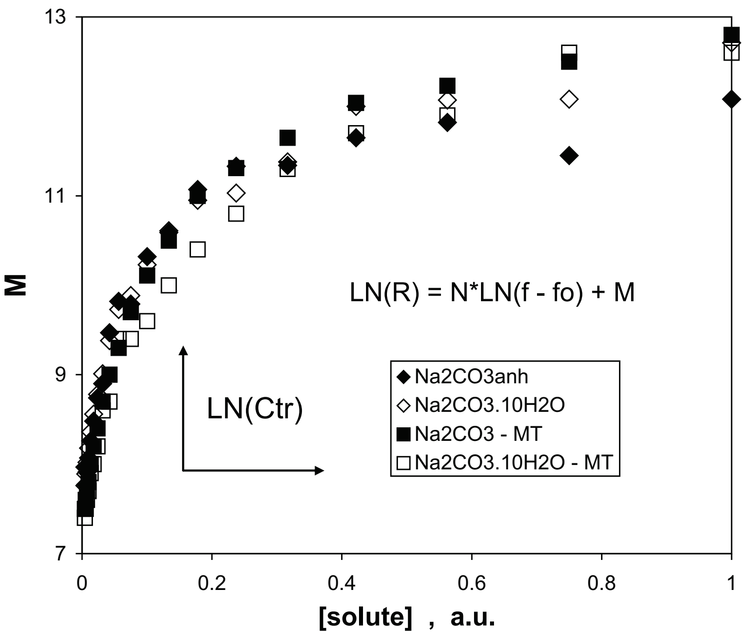

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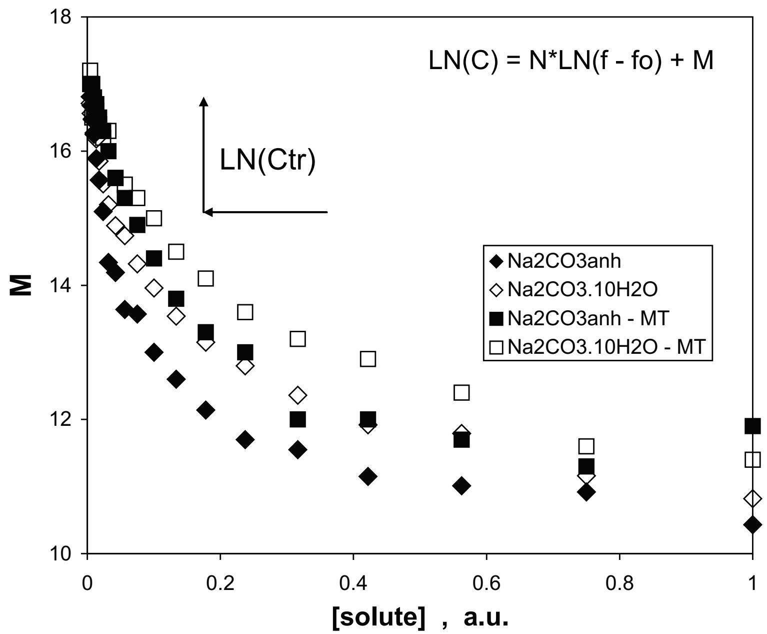

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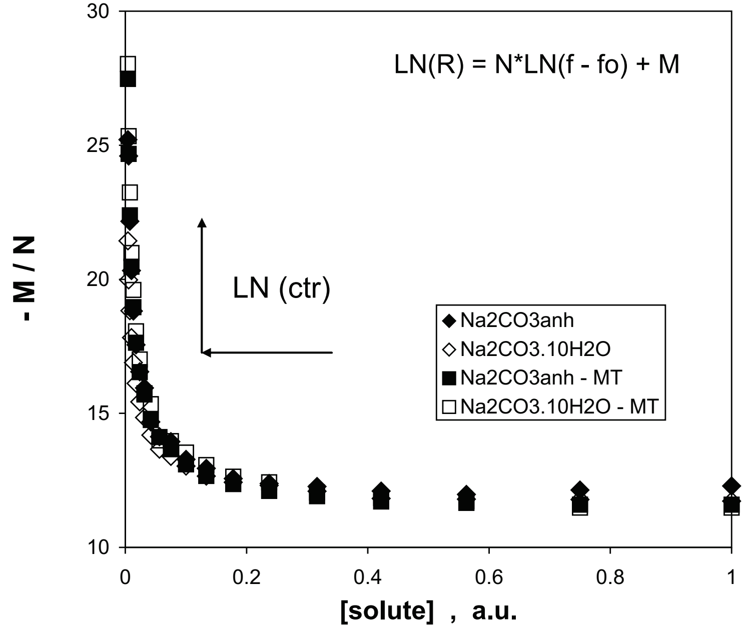

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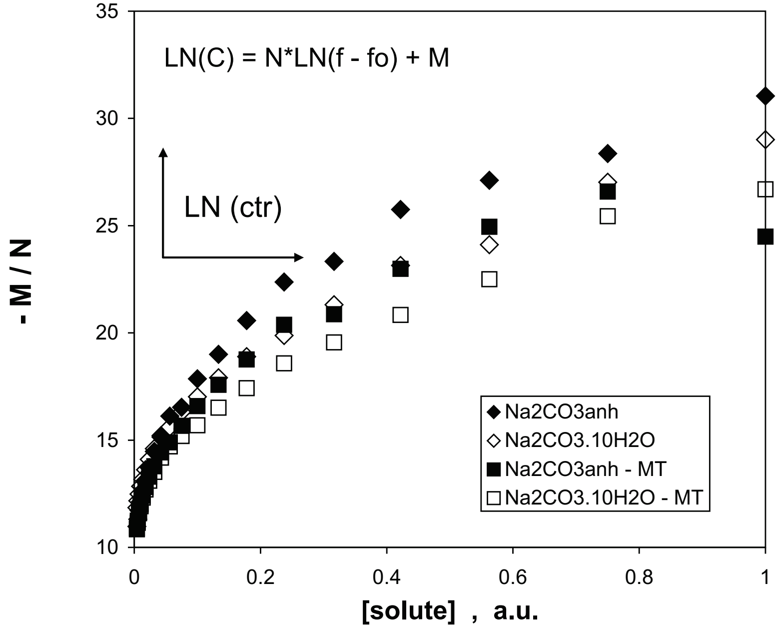

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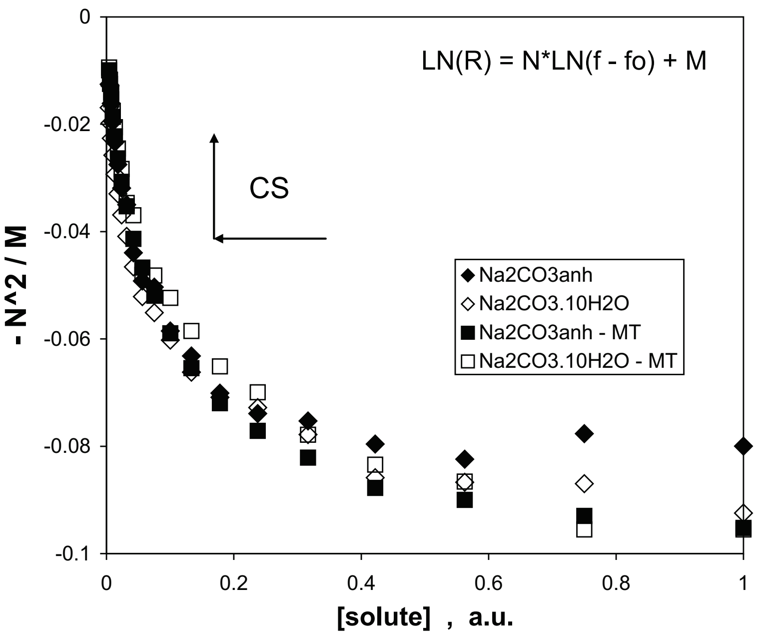

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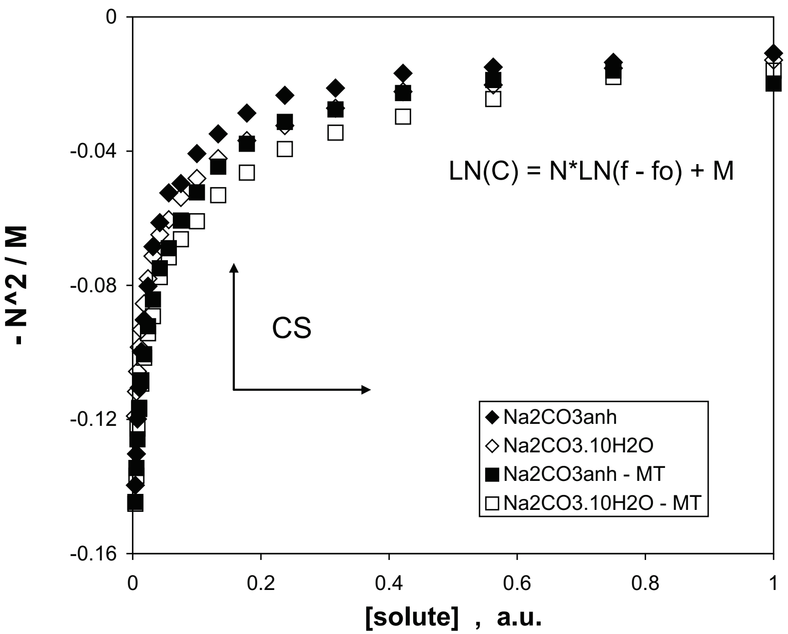

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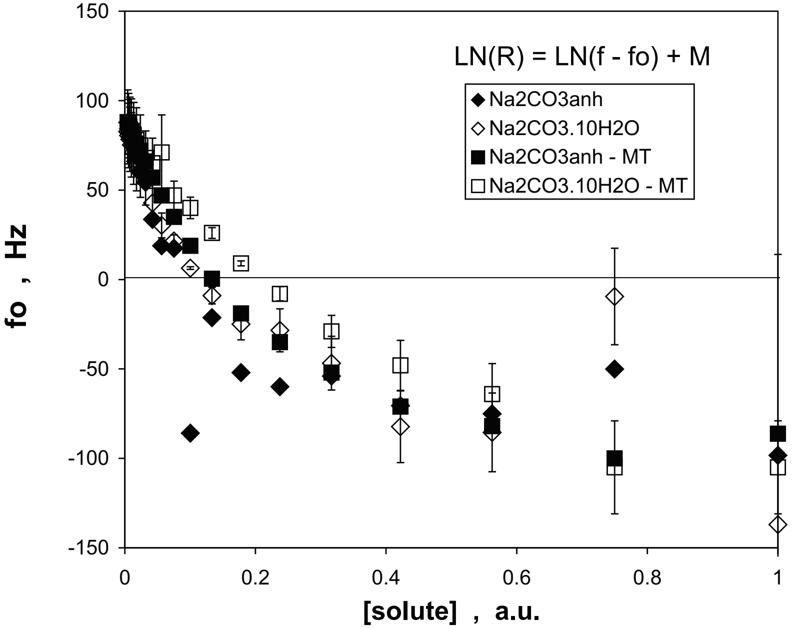

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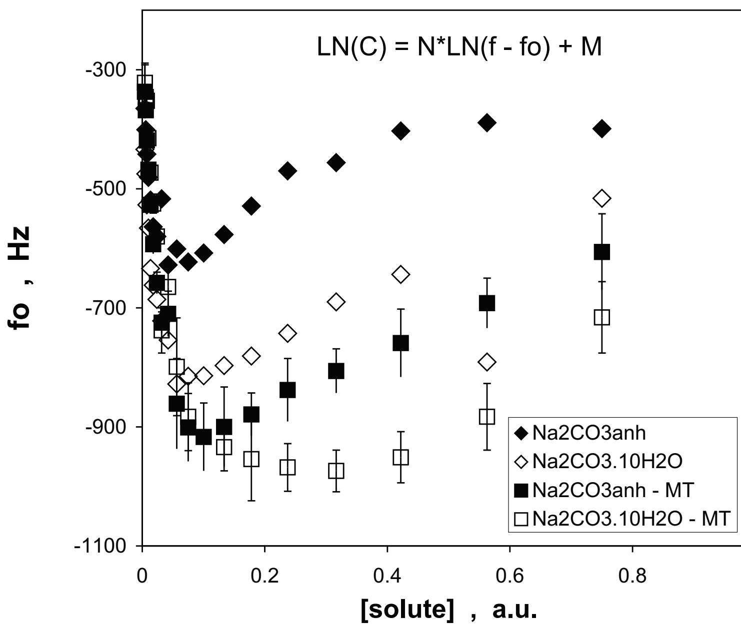

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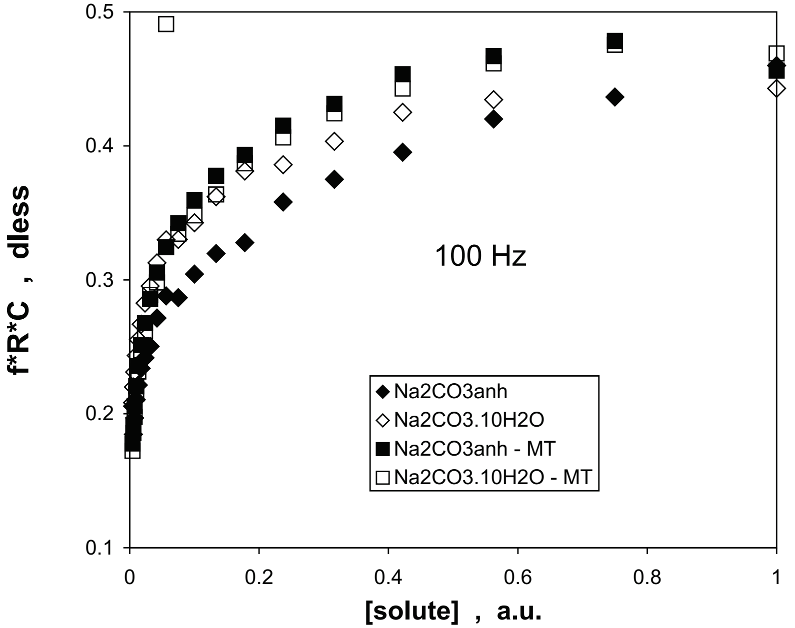

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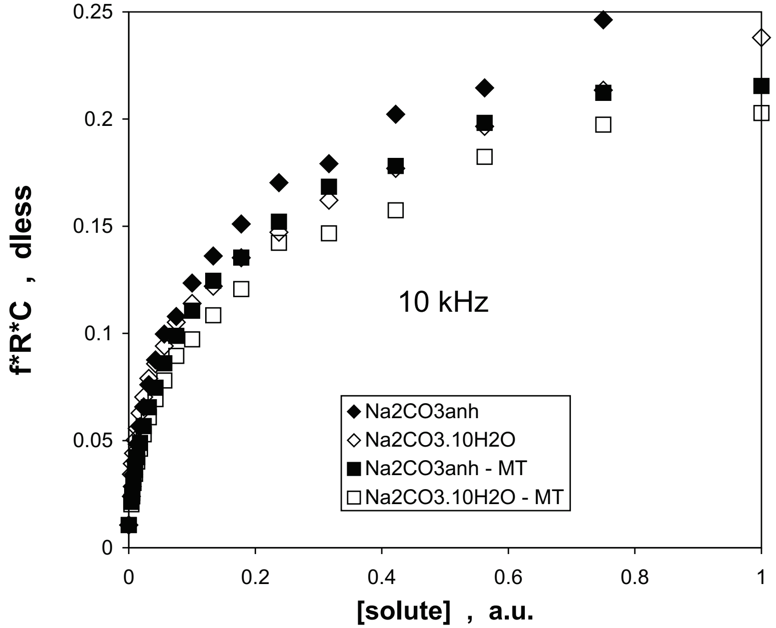

Figure 16.

ISSN 1453 - 1674

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Previous issues of GDF DATABANKS BULLETIN

Year	VOL	NO	Content (titles)	$*)
1997	1	1	Editorial: Databanks – the compulsory language. LOGKOW – a Databank of evaluated octanol-water partition coefficients (James Sangster). Solubility behavior introducing topoenergetic working principles. Comments on 1-octanol-water partition of several n-alkane related series.	F
1997	1	2	Guide of good practice in metrology (Romanian)	AFI
1998	2	1	Editorial: socio-psychological implications in creation and utilization of a databank (Ioan-Bradu Iamandescu); Behavior in vapor-liquid equilibria (VLE): I. Structural aspects; Behavior in vapor-liquid equilibria: II. Several structures in databanks; Symposium on VDC-4 held on 30 October 1997 at Lubrifin-SA, Brasov (Romania).	F
1998	2	2	Practical course of metrology (Romanian)	AFI
1998	2	3	DIFFUTOR-01: Thermally driven diffusion in pure metals	AFI
1998	2	4	VAPORSAT-01: Databanks of thermally driven VLE. The first 100 simple molecules	AFI
1999	3	1	Editorial: New trends in material science: nanostructures (Dan Donescu) DIFFUTOR: Databanks of diffusion kinetics. VAPORSAT: Databanks of vapor-liquid separation kinetics.	F
1999	3	2	Discussions on Applied Metrology	AFI
2000	4	1	Editorial: Laboratory accreditation and inter-laboratory comparisons (Virgil Badescu) Doctoral Theses – important data banks. GDF intends to open new series of experiments on thermo-physical properties. Some comments on uncertainty: global budget and DFT analysis. Events: The 9th International Metrology Congress, Bordeaux, France, 18-21 October 1999.	F
2000	4	2	Measurement and Calibration.	AFI
2001	5	1	Editorial: Metrology ensures moral and technological progress. Topoenergetic aspects of amorphous-crystalline coupling. I. Composite behavior of water and aqueous solutions (paper presented at nanotubes and Nanostructures 2001, LNF, Frascati, Rome Italy, 17-27 October 2001). Events: Nanotubes and nanostructures 2000.School and workshop, 24 September – 4 October 2000, Cagliari, Italy.	F
2001	5	2	Editorial: Viscosity – a symptomatic problem of actual metrology. Visco-Dens Calorimeter: general features on density and viscosity measurements. New vision on the calibration of thermometers: ISOCALT® MOSATOR: Topoenergetic databanks on molten salts properties driven by temperature and composition.	F

continued

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2002	6	1	MOSATOR-01: Topoenergetic databanks for one component molten salts; thermally driven viscosity and electrical conductance.	AFI
2002	6	2	Editorial: HuPoTest - Operator calibration or temporal scale psychic test. MOSATOR: topoenergetic databanks of one component molten salts; thermally driven viscosity and electrical conductance.	F
2002	6	3	Editorial: Quo vadis Earth experiment? ISOCALT® : Report on metrological tests	F
2003	7	1	Editorial: Time – an instrument of the selfish thinking. 1st NOTE: Homoeopathy: upon some efficient physical tests revealing structural modifications of water and aqueous solutions. I. Mixing experiments.	F
2004	8	1	Metrological verification and calibration of thermometers using thermostats type ISOCALT® 21/70/2. Metrological verification and calibration of thermometers using thermostats type ISOCALT® 2.2R.	F
2004	8	2	Aspects of correct measurements of temperature. I. measurement of a fixed point according to ITS-90. Physics and Homoeopathy: some physical requirements for homoeopathic practice.(Plenary lecture at the 19th SRH National Congress, 21-22 September 2004, Bucharest, Romania)	F
2005	9	1	AWARD for ISOCALT® at the International Fair TIB-2004, October 2004, Bucharest. ISOCALT® 3/70/21 was awarded in a selection of 20 products by a commission of experts from the Polytechnic University of Bucharest. Upon some aspects of temperature measurements. (12th International Metrology Congress, 20-23 June 2005, Lyon, France)	F
2005	9	2	A new technique for temperature measurement and calibration. National Society of Measurements (NSM). Important warning for T-calibrator users: MSA has chose metrology well calibrators from Fluke (Hart Scientific).	F
2005	9	3	Universal representation of Cancer Diseases. 1. First sight on NSW-2003 report. Universal representation of Cancer Diseases. 2. UK cancer registrations on 1999-2002. Vital Potential can estimate our predisposition for cancer diseases.	F
2006	10	1	NTC – thermistors -1	AFI
2007	11	1	HuPoTest - 40 years of continuous research Basic rules for preventing and vanishing cancer diseases Climate change = change of mentality Hot nuclear fusion – a project of actual mentality	F
2007	11	2	MT – Introduction to Mental Technology HuPoTest – general procedure, assignments of results, specimen of complete test, order and obtain your complete HuPoTest report	F

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2007	11	3	TRESISTOR© - data banks of materials with thermally driven electric and magnetic properties TRESISTOR© - NTC -1 - data bank of NTC thermistors	AFI
2008	12	1	Australian population: life, death and cancer	F
2008	12	2	Pattern of Cancer Diseases	F
2008	12	3	Adiabatic calorimetry – summary description of the demo prototype	F
2008	12	4	Flight QF 30 and even more… Temperature calibration of NTC-thermistors. 1.Preliminary results.	F
2009	13	1	Proposal for interlaboratory comparisons. Calibration of NTC-thermistors (The 14^{th} International Metrology Congress, Paris, France, 22-25 June 2009)	F
2009	13	2	Sudoku – un algoritm de rezolvare (Sudoku – an algorithm for solution)	AFI
2009	13	3	Cancer and Diabetes – as social diseases (Open letter to all whom it may concern)	F
2010	14	1	Studies on cement hydration by High Resolution Mixing Calorimetry (HRMC)	F
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2010	14	4	Cancer as an erosion process in human society	F
2010	14	5	Cancer erosion in Australian human society: 1982 - 2006	F
2010	14	6	Cancer erosion in German human society:1980-2008	F
2011	15	1	Procedures and devices for energy and water saving. (I) (in Romanian)	F
2011	15	2	Structural and relativistic aspects in transforming systems. I. Arrhenius and Universal representations of thermally driven processes.	F
2011	15	3	Topoenergetic aspects of water structuring as revealed by ac electric conductivity	F
2011	15	4	Topoenergetic aspects of human body	F
2011	15	5	HuPoTest: four month study of a case	F
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2012	16	2	DTA study of water freezing. II. Statistical features on one week of experiments.	F
2012	16	3	DTA study of water freezing. III. New facts on daily mental field.	F
2012	16	4	Mental field and state of health Câmpul mental și starea de sănătate	F
2013	17	1	DTA study of water freezing. IV. New facts on energy circuits	F
2013	17	2	DTA study of water freezing.V. Effect of a mental antenna	F

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15	2	Figure 5	P+	P-
15	3	page 5, row 7 down-to-up	x=2	x=0.2

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