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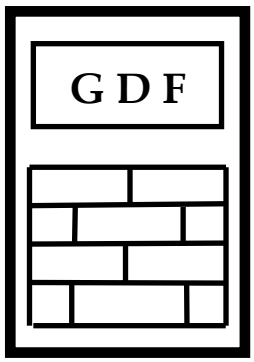

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High resolution mixing calorimetry redivivus. IV. Specific heat of crystalline phase of water

MOTTO: ***Material science without calorimetry is blind.***

Composite structure of water and aqueous solutions in liquid state was definitely established by calorimetry, i.e. by solution, dilution [1], melting [2] and by mixing experiments with so called "structure developers" [3].All such kind of experiments were performed with High Resolution Mixing Calorimeter (HRMC) recently reminded [4] as substantiating the interaction of mental and bio-fields with such structures [5, 6].

Crystalline phase in water and aqueous solutions represents the phase which remains untouched in all kind of mixing processes. In recent HRMC experiments on two series of aqueous solutions at room temperature, specific energy of mixing with ethanol (EtOH), Em/m (in J/g, m=mass of overall solution), resulted to be in linear relation with specific heat, Cp (in J/(g* ^{0}C)) for each family of solutes as phylogenic series in topologic terms [7] (Table 1 and Figure 10 in [4]). It results that for Em/m =0, i.e. for no mixing interaction, Cpo = m1/n1 represents the specific heat of the crystalline phase of water. The values for Cpo for the two series of solutions are given in the Table bellow (u is standard uncertainty with confidence level of 68.3%).

Em/m = n1*Cp + m1

Aq.solns. series	n1	u(n1)	m1	u(m1)	Cpo = -m1/n1	u(m1/n1)
	^{0}C		J/g		J/(g*^{0}C)	
sulfates	163.6	0.5	-532	2	3.252	0.002
glycerol	27	6	-96	23	3.56	0.06

There are several important reasons for which these values are significantly different, namely: (i) the original water as solvent is different; (ii) solutes affect differently crystalline phase of water; (iii) history of solution series is different; for instance, glycerol solutions were older than 10 years, while the sulfate ones were performed several days before HRMC experiments, so the crystalline phase can be different. The highest Cp of water in comparison with all considered solutions means that amorphous phase of water has greatest number of kinetic entities captured in more or less rigid structures by solutes (see the structural model recently considered, Figure 4 in [6]).

Conclusion: Such experiments can be extended for a large variety of composite structures in view to establish the nature and amplitude of each phase/component according to the topoenergetic principles.

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International Congress of World Psychiatric Association, PRIMARY CARE MENTAL HEALTH: INNOVATION AND TRANSDISCIPLINARITY Bucharest, 24-27 June 2015, ROMANIA

MOTTO: ***Mental science and material science are strongly connected.***

WPA2015 (http://www.wpa2015bucharest.org/) was the most important event in psychiatric world of the year reuniting approximately 1000 participants debating their ideas in five famous rooms of Palace of Parliament. Important to mention there are a plenty of psychiatric associations and over ten international congresses on psychiatry in 2015. Presentations to WPA2015 were admitted on 300 word abstract and 2 citations and no extended form of papers was required. According to the launched definition of psychiatry as the science of mind, I considered that my research on mental technology could interest most of participants (see bellow the abstract of my presentation). The most debated topic was depression as the most widespread mental disease. On my opinion, the additional reason is that patients suffering for depression have the ability to contact doctors in comparison with other more serious mental diseases for which patients are not able to realize their status and actual psychiatry has no operating procedures. My question on "how doctor and patient meet together: doctor goes to patient or patient goes to doctor" had no clear answer. On the other hand, WPA and other similar psychiatric associations have no well defined terms for which I suggested the creation of glossary of terms posted on the WPA web site (http://wpanet.org).

Mental Field, Health State and Social Stability

Gheorghe Drăgan
Romania

As a result of intense and long experience I was able to establish some basic aspects of human mental field (HMF) and its interaction with different materials. Experiments on freezing kinetics of tap water were initiated in view to establish structural differences between Sydney (Australia) and Bucharest (Romania) tap water [1]. I observed that temperature is not the main driving potential as for previous similar experiments on other transforming systems, but the individual and/or collective HMF blocks water freezing process [2]. Main stages of these experiments are presented together with the HuPoTest as an original and highly efficient test in defining my personal mental state as the background HMF influencing experimental results. Individual mental state mainly consists by the native/karmic component („basic instinct") and the obtained one by education and life experience. These can be in more or less conflict producing proportional perturbation in info-energy flow in the organism defining the general health state. The more common example of this conflict is the difference between basic thoughts hidden by external behavior („talking differently than thinking"). These aspects are discussed in terms of different forms of energy wrapping pure information. HMF is resultant of individual contributions defining its nature and amplitude. For instance, randomly oriented and highly active mental state has a great blocking effect on water freezing, produces social conflicts, induces social instability and is directly connected with uncontrolled growth of population. Time dependence of world population looks like a lambda shape phase transition at the estimated date of 2035 with the standard uncertainty of 3 years and correlation coefficient of 0.99.

Conclusion: For personal and social safety it is absolutely necessary to control both individual mental state and HMF.

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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
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	F

			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)	
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
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 14th 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
2010	14	2	Measuring tools for subtle potentials; pas-LED: an efficient measuring tool for subtle potentials.	F
2010	14	3	Upon some features of cancer in Australia: 1982 – 2006.	F
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
2012	16	1	DTA study of water freezing. I. Upon some aspects of repeatability.	F
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
2013	17	3	AC electric conductivity of untreated and mentally treated electrolyte aqueous solutions.	F
2013	17	4	DTA study of water freezing. VI. Mental field in a working day.	F
2013	17	5	DTA study of water freezing. VII. More statistical features on one week of experiments.	F
2013	17	6	HuPoTest: New measurements and results	F
2013	17	7	Time as unique base quantity. (Proceedings of the 16th International Congress of Metrology, 7-10 October 2013, Paris, France).	F
2013	17	8	Eurovision song contest. 1.Basic social aspects	F
2013	17	9	Mental field-water interaction as evidenced by Isothermal Convection Flow Calorimetry (ICFC). I. ICFC description and preliminary results.	F
2013	17	10	1. Procedure for defining standard liquids for viscosity based on topoenergetic principles. 2. Topological aspects of flow and deformation in polymer composites, The VIII-th International Congress on Rheology, 1-5 September 1980, Naples, Italy, pp. 375-376. 3. Universal representation of flow behavior based on topoenergetic principles, The IX-th International Congress on Rheology, 8-13 October 1984, Accapulco, Gro. Mexico, pp.369-376. 4. Comments on "Universal representation of flow behavior based on topoenergetic principles", The IX-th International Congress on Rheology, 8-13 October 1984, Accapulco, Gro. Mexico, pp. 369-376. 5. Open letter to BRML and INM.	F
2014	18	1	Adiabatic calorimeter as high accuracy T-calibrator	F
2014	18	2	Mental field-water interaction as evidenced by Isothermal Convection Flow Calorimetry (ICFC). II. Effect of convection flow power.	F
2014	18	3	Eurovision song contest. II. Copenhagen, Denmark 2014 and some more features on social mentality.	F
2014	18	4	The 38th Congress of American-Romanian Academy (ARA) of Arts and Sciences, 23-27 July 2014, Pasadena, California, USA	F
2015	19	1	Gold versus money. 1. An overview on main financial figures of world countries.	F
2015	19	2	Gold versus money. 2. Rich, middle and poor countries.	F
2015	19	3	High Resolution Mixing Calorimetry (HRMC) redivivus. 1. General presentation and heat capacity measurements.	F
2015	19	4	High Resolution Mixing Calorimetry (HRMC) redivivus. 2. Structure developing of aqueous solutions by mixing experiments.	F
2015	19	5	High Resolution Mixing Calorimetry (HRMC) redivivus. 3. Calibration	F
2015	19	6	Evidence of human mental field by ac-electric conductivity in electrolyte solutions. 1. Bio-energy.	F

*) F=free, AFI=ask for invoice.

ERRATA:

VOL	NO	place	was written	must be
15	2	Figure 5	P+	P-
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I encourage readers to advice me any observation.

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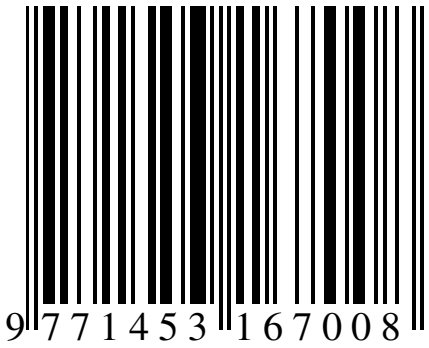

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