

**4<sup>th</sup> BLACK SEA BASIN CONFERENCE ON ANALYTICAL  
CHEMISTRY  
(4<sup>th</sup> BBCAC)**



**ABSTRACTS AND PROGRAMME**

**Edited by D. L. Tsalev and E. H. Ivanova  
19–23 September 2007  
Sunny Beach, BULGARIA  
<http://www.chem.uni-sofia.bg/bbcac-4>**

**4<sup>th</sup> BLACK SEA BASIN CONFERENCE ON ANALYTICAL  
CHEMISTRY  
19–23 September 2007  
Sunny Beach, BULGARIA  
<http://www.chem.uni-sofia.bg/bbcac-4>**

***This conference continues the previous successful conferences: the 1<sup>st</sup> BBCAC, 11–15 Sept. 2001 in Odessa, Ukraine; the 2<sup>nd</sup> BBCAC, 14–17 Sept. 2003 in Sile-Istanbul, Turkey; and the 3<sup>rd</sup> BBCAC, 12–14 Sept. in Constanta, Romania.***

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***The 4<sup>th</sup> BBCAC is organized by***

**Union of Chemists in Bulgaria**

**Society of Analysts in Bulgaria**

**University of Sofia “St. Kliment Ohridski” – Faculty of  
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**Bulgarian Institute of Metrology**

*The 4<sup>th</sup> BBCAC Conference covers all aspects of Analytical Chemistry, including environmental analysis, chemometric approaches, chemical speciation and metrology in chemistry. Presentations and discussions on analytical and environmental aspects of Black Sea are particularly welcome. The programme includes 2 plenary lectures (PL), 4 Oral sessions (O), 2 company presentations (OC), a 5<sup>th</sup> oral session on metrology (OM), 3 poster sessions (P), and a session on Training in Metrology in Chemistry (TrainMiC<sup>®</sup>) organized by the Institute of Reference Materials and Measurements, EC-JRC-IRMM*

## PLENARY LECTURES

**Professor Dr. Gary D. Christian**, Department of Chemistry, University of Washington, Box 351700, Seattle, WA 98195-1700 USA, Fax: 206-685-3478, email: christian@chem.washington.edu, "SCIENTIFIC WRITING, OR HOW I LEARNED TO LOVE BEING AN EDITOR".

**Professor Dr. Walter Goessler**, Institute of Chemistry – Analytical Chemistry, Karl-Franzens University Graz, Universitätsplatz 1, 8010 Graz, Austria, "SPECIATION ANALYSIS IN THE MARINE ENVIRONMENT – PRINCIPLES, TECHNIQUES AND APPLICATIONS"

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<p><b>Wed</b> 19<sup>th</sup> Sept.</p>	<p><b>9:00–19:00 Registration</b></p>	<p><b>15:30 – 16:00</b> <b>Opening ceremony</b> <b>16:00–18:00 Oral session 1</b> 16:00 – 16:40 PL1 16:40 – 17:00 O1 17:00 – 17:20 O2 17:20 – 17:40 O3 17:40 – 18:00 O4</p>	<p>19:30 – 21:00 Mixer</p>
<p><b>Thurs</b> 20<sup>th</sup> Sept.</p>	<p><b>8:00–15:00 Registration</b></p> <p><b>9:00–10:40 Oral session 2</b> 9:00 – 9:40 PL2 9:40 – 10:00 O5 10:00 – 10:20 O6 10:20 – 10:40 O7</p> <p>10:40 – 11:10 Coffee</p> <p><b>11:10–12:50 Oral session 3</b> 11:10 – 11:30 O8 11:30 – 11:50 O9 11:50 – 12:10 O10 12:10 – 12:30 O11 12:30 – 12:50 O12</p> <p>12:50 – 15:00 Lunch</p>	<p><b>15:30–16:50 Oral session 4</b> 15:30 – 15:50 O13 15:50 – 16:10 O14 16:10 – 16:30 OC1 16:30 – 16:50 OC2</p> <p><b>17:00–19:30</b> <b>Poster session 1</b> (P1 – P50)</p>	<p>20:00 – 23:00 Conference Dinner</p>
<p><b>Fri</b> 21<sup>st</sup> Sept.</p>	<p><b>10:00–12:30 Poster session 2</b> (P51 – P100)</p> <p>12:50 – 15:00 Lunch</p>	<p><b>16:00–18:30</b> <b>Poster session 3</b> (P100 – P150+)</p> <p>17:30 – 18:00 Coffee</p>	<p>19:00 – 21:00 Dinner</p>
<p><b>Sat</b> 22<sup>nd</sup> Sept.</p>	<p><b>9:00–10:20 “Train MiC<sup>®</sup>”</b> (EC-JRC-IRMM)</p> <p>9:00 – 9:40 Train MiC 9:40 – 10:20 TrainMiC</p> <p><b>10:30–12:30 Oral session 5</b> <b>“Metrology”</b> 10:30–10:50 OM1 10:50–11:10 OM2 11:10–11:30 OM3 11:30–11:50 OM4 11:50–12:10 OM5 12:10–12:30 OM6</p>	<p><b>12:30 – 13:00</b> <b>Closing</b></p> <p>13:00 – 14:00 Lunch</p> <p>14:00 – Excursion (optional)</p>	

*4<sup>th</sup> BBCAC, 19-23 Sept., Sunny Beach, Bulgaria*

**4<sup>th</sup> BBCAC Programme (Preliminary)  
Wednesday, 19<sup>th</sup> Sept. 2007**

**9:00–19:00 Registration**

**15:30 – 16:00 Opening ceremony**

**16:00–18:00 Oral session 1**

16:00 – 16:40 **PL1 Walter Goessler** (Austria) “SPECIATION ANALYSIS IN THE MARINE ENVIRONMENT – PRINCIPLES, TECHNIQUES AND APPLICATIONS”

16:40 – 17:00 **O1 Alexander Strezov** (Bulgaria) “COMPARISON OF SOME RADIONUCLIDES IN THE MARINE COASTAL ENVIRONMENT OF THE BLACK SEA AND THE MEDITERRANEAN”

17:00 – 17:20 **O2 Marek Trojanowicz**, A. Bojanowska-Czajka, P. Drzewicz, A. Gałęzowska, H. Nichipor, G. Nałęcz-Jawecki (Poland), “CHROMATOGRAPHIC AND TOXICOLOGICAL INVESTIGATION OF DECOMPOSITION OF PESTICIDES IN WATERS AND WASTES USING IONIZING RADIATION”

17:20 – 17:40 **O3 Irina V. Kubrakova** (Russia), “MICROWAVE-ASSISTED SAMPLE PREPARATION AS ECOFRIENDLY TECHNIQUE FOR ROUTINE ANALYSIS”

17:40 – 18:00 **O4 A. Muammer Canel**, E. Canel, Z. Mısırlıoğlu, L. Ballice (Turkey), “DETERMINATION OF VOLATILE PRODUCT DISTRIBUTION AND PRODUCT EVOLUTION BY GAS CHROMATOGRAPHY DURING TEMPERATURE PROGRAMMED PYROLYSIS OF SOLID FUELS”

**19:30 – 21:00 Mixer**

**Thursday, 20<sup>th</sup> Sept. 2007**

**8:00–15:00 Registration**

**9:00–10:40 Oral session 2**

9:00 – 9:40 **PL2 Gary D. Christian** (USA) “SCIENTIFIC WRITING, OR HOW I LEARNED TO LOVE BEING AN EDITOR”

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- 9:40 – 10:00 **O5** Raluca Mocanu, D. Dragan, M. Dobrin-Cioroiu, S. Cucu-Man (Romania), "HEAVY METAL AND POPs BIOMONITORING AND QUANTIFICATION"
- 10:00 – 10:20 **O6** Liudmil Antonov (Bulgaria), "STEP BY STEP FILTER (SBSF) – AN ALTERNATIVE IN DERIVATIVE SPECTROSCOPY"
- 10:20 – 10:40 **O7** Claudia Stihi, I. V. Popescu, G. Busuioc, T. Badica, A. Bancuta, M. Florescu (Romania), "PIXE METHOD APPLIED TO ENVIRONMENTAL STUDIES"

10:40 – 11:10 *Coffee*

**11:10–12:50 Oral session 3**

- 11:10 – 11:30 **O8** Vera I. Slaveykova, C. Lamelas, N. Parthasarathy (Switzerland), "ASSESSING THE IMPACT OF TOXIC TRACE METALS IN AQUATIC ECOSYSTEMS: TOWARD DEVELOPMENT OF BIO(ANA)LOGICAL SENSOR"
- 11:30 – 11:50 **O9** C. EKINCI DOGAN, Goksel AKCIN (Turkey), "SYNTHESIS OF A NEW CHELATING MATRIX AND ITS APPLICATION"
- 11:50 – 12:10 **O10** Ewa Bulska, A. Ruszczynska, B. Wagner, M. Wojciechowski (Poland), "MICROANALYSIS OF SOLIDS BY LASER ABLATION ICP-MS"
- 12:10 – 12:30 **O11** N. K. Zaytsev, S. V. Shorin, D. S. Stanev (Russia), "DETERMINATION OF ALKALINE AND ALKALINE EARTH METALS IN BULGARIAN MINERAL WATERS WITH AMPEROMETRIC ION SELECTIVE ELECTRODES"
- 12:30 – 12:50 **O12** Spas D. Kolev (Australia), "ON-LINE GAS-DIFFUSION FLOW INJECTION DETERMINATION OF Hg AND As IN COMPLEX AQUEOUS SAMPLES"

12:50 – 15:00 *Lunch*

**15:30–16:50 Oral session 4**

- 15:30 – 15:50 **O13** Alexander P. Boichenko, L. P. Loginova, A. U. Kulikov, E. Yu. Yakovleva (Ukraine), "EVALUATION OF RUGGED AND OPTIMAL ANALYSIS CONDITIONS IN MICELLAR LIQUID CHROMATOGRAPHY BY USING INTERPRETATIVE OPTIMIZATION STRATEGY AND DERRINGER'S DESIRABILITY FUNCTION"

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15:50 – 16:10 **O14** Sorin Marius Avramescu, N. Mihalache, F. Ruta, C. Bradu, I. Udrea (Romania), *“MONITORING THE PHENOL OXIDATION IN AQUEOUS SOLUTIONS VIA TOC AND COD METHODS”*

16:10 – 16:30 **OC1** Danail Yordanov (T.E.A.M. Ltd. – Authorized Distributor & Service Center of Analytik Jena for Bulgaria), *“HIGH RESOLUTION CONTINUUM SOURCE AAS”*

16:30 – 16:50 **OC2** Pencho Tuleshkov (T.E.A.M. Ltd. – Authorized Distributor & Service Center of Agilent Technologies for Bulgaria), *“NEW AGILENT 7500cx ICP-MS”*

**17:00–19:30 Poster session 1** (P1 – P50)

20:00 – 23:00 Conference Dinner

**Friday, 21<sup>st</sup> Sept. 2007**

**10:00–12:30 Poster session 2** (P51 – P100)

12:50 – 15:00 Lunch

**16:00–18:30 Poster session 3** (P100 – P150+)

17:30 – 18:00 Coffee

19:00 – 21:00 Dinner

**Saturday, 22<sup>nd</sup> Sept. 2007**

**9:00–10:20 “Train MiC<sup>®</sup>”** (EC-JRC-IRMM)

9:00 – 9:40 **Train MiC**

9:40 – 10:20 **TrainMiC**

**10:20–10:30 Oral session 5 “Metrology”**

10:30–10:50 **OM1** Ivan Havezov, A. Petrov (Bulgaria), *“VALIDATION OF CHEMICAL MEASUREMENTS”*

10:50–11:10 **OM2** Ulf Jacobsson (Belgium), *“INFLUENTIAL FACTORS IN MASS DETERMINATION”*

11:10–11:30 **OM3** L. P. Loginova, A.P. Boichenko, O.G. Maslij (Ukraine), *“UNCERTAINTY ESTIMATION VS. TRADITIONAL CONCEPT OF ERRORS: APPLICATION IN APPLIED*



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**ANALYTICAL CHEMISTRY AND CHEMICAL  
EDUCATION”**

- 11:30–11:50 **OM4** **Alexander N. Zacharia**, S. Gucer, M. Rozhnov, A. Chebotarev, “*VIEW ON IMPROVEMENT OF PROFESSIONAL TESTING AND COMPETENCE FOR THE PERSONNEL OF ANALYTICAL CHEMISTRY LABORATORIES*”
- 11:50–12:10 **OM5** **Yuriy Kholin**, V. Ivanov, A. Panteleimonov (Ukraine), “*NEW CHEMOMETRIC TOOLS FOR HANDLING PRIMARY DATA OF QUANTITATIVE PHYSICO-CHEMICAL ANALYSIS*”
- 12:10–12:30 **OM6** **E. Vassileva**, C. Quétel (Belgium), “*IMPORTANT ANALYTICAL CHALLENGES FOR THE CERTIFICATION OF TRACE ELEMENT AMOUNT CONTENTS IN ENVIRONMENTAL MATRICES USING ISOTOPE DILUTION INDUCTIVELY COUPLED PLASMA MASS SPECTROMETRY*”

**12:30 – 13:00 Closing**

**13:00 – 14:00 Lunch**

**14:00 – Excursion (optional)**

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O1 – O14	Oral presentations (20 min)	Wednesday afternoon, Thursday morning and Thursday afternoon
P1 – P150	Posters (3 sessions)	Thursday afternoon, Friday morning and Friday afternoon
OC1 – OC2	Oral presentations by companies (20 min)	Thursday afternoon
MiC	Training in Metrology in Chemistry (TrainMiC <sup>®</sup> ), organized by EC-JRC-IRMM (2 x 45 min)	Saturday morning
OM1 – OM6	Oral presentations on metrology (20min)	Saturday morning
LP	Late posters (not included in the Book of Abstracts)	Friday afternoon

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PL1

**SPECIATION ANALYSIS IN THE MARINE ENVIRONMENT –  
PRINCIPLES, TECHNIQUES AND APPLICATIONS**

Walter Goessler

*4<sup>th</sup> BBCAC, 19-23 Sept., Sunny Beach, Bulgaria*

PL2

**SCIENTIFIC WRITING, OR HOW I LEARNED TO LOVE BEING  
AN EDITOR**

Gary D. Christian

*4<sup>th</sup> BBCAC, 19-23 Sept., Sunny Beach, Bulgaria*

O1

**COMPARISON OF SOME RADIONUCLIDES IN THE MARINE  
COASTAL ENVIRONMENT OF THE BLACK SEA AND THE  
MEDITERRANEAN**

Alexander Strezov

**CHROMATOGRAPHIC AND TOXICOLOGICAL INVESTIGATION  
OF DECOMPOSITION OF PESTICIDES IN WATERS AND  
WASTES USING IONIZING RADIATION**

Marek Trojanowicz<sup>1,2</sup>, Anna Bojanowska-Czajka<sup>1</sup>, Przemysław  
Drzewicz<sup>1</sup>,  
Angelika Gałęzowska<sup>2</sup>, Henrietta Nichipor<sup>3</sup>, Grzegorz Nałęcz-  
Jawecki<sup>4</sup>

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O3

**MICROWAVE-ASSISTED SAMPLE PREPARATION AS  
ECOFRIENDLY TECHNIQUE FOR ROUTINE ANALYSIS**

I. V. Kubrakova

**DETERMINATION OF VOLATILE PRODUCT DISTRIBUTION AND  
PRODUCT EVOLUTION BY GAS CHROMATOGRAPHY DURING  
TEMPERATURE PROGRAMMED PYROLYSIS OF SOLID FUELS**

A. Muammer Canel<sup>+</sup>, Esin Canel<sup>+</sup>, Zarife Mısırlıoğlu<sup>+</sup>, Levent  
Ballice\*



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O5

**HEAVY METAL AND POPs BIOMONITORING AND  
QUANTIFICATION**

Raluca Mocanu\*, Doina Dragan, Mona Dobrin-Cioroiu and Simona  
Cucu-Man

*4<sup>th</sup> BBCAC, 19-23 Sept., Sunny Beach, Bulgaria*

O6

**STEP BY STEP FILTER (SBSF) – AN ALTERNATIVE IN  
DERIVATIVE SPECTROSCOPY**

Liudmil Antonov

*4<sup>th</sup> BBCAC, 19-23 Sept., Sunny Beach, Bulgaria*

**O7**

**PIXE METHOD APPLIED TO ENVIRONMENTAL STUDIES**

C. Stihl<sup>1</sup>, I. V. Popescu<sup>1</sup>, G. Busuioc<sup>1</sup> T. Badica<sup>2</sup>,  
A. Bancuta<sup>1</sup>, M. Florescu<sup>3</sup>

**ASSESSING THE IMPACT OF TOXIC TRACE METALS IN  
AQUATIC ECOSYSTEMS: TOWARD DEVELOPMENT OF  
BIO(ANA)LOGICAL SENSOR**

Vera I. Slaveykova<sup>1</sup>, Cristina Lamelas<sup>1</sup> and Nalini Parthasarathy<sup>2</sup>

*4<sup>th</sup> BBCAC, 19-23 Sept., Sunny Beach, Bulgaria*

O9

**SYNTHESIS OF A NEW CHELATING MATRIX AND ITS  
APPLICATION**

**Canan EKINCI DOGAN, Goksel AKCIN**

*4<sup>th</sup> BBCAC, 19-23 Sept., Sunny Beach, Bulgaria*

O10

**MICROANALYSIS OF SOLIDS BY LASER ABLATION ICP-MS**

**Ewa Bulska, Anna Ruszczyńska, Barbara Wagner and Marcin  
Wojciechowski**

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O11

**DETERMINATION OF ALKALINE AND ALKALINE EARTH  
METALS IN BULGARIAN MINERAL WATERS WITH  
AMPEROMETRIC ION SELECTIVE ELECTRODES**

N. K. Zaytsev<sup>1</sup>, S. V. Shorin<sup>3</sup>, D. S. Stanev<sup>2</sup>

*4<sup>th</sup> BBCAC, 19-23 Sept., Sunny Beach, Bulgaria*

O12

**ON-LINE GAS-DIFFUSION FLOW INJECTION DETERMINATION  
OF MERCURY AND ARSENIC IN COMPLEX AQUEOUS  
SAMPLES**

Spas D Kolev



**EVALUATION OF RUGGED AND OPTIMAL ANALYSIS  
CONDITIONS IN MICELLAR LIQUID CHROMATOGRAPHY BY  
USING INTERPRETATIVE OPTIMIZATION STRATEGY AND  
DERRINGER'S DESIRABILITY FUNCTION**

Alexander P. Boichenko, Lidia P. Loginova, Artem U. Kulikov, E. Yu.  
Yakovleva

*4<sup>th</sup> BBCAC, 19-23 Sept., Sunny Beach, Bulgaria*

O14

**MONITORING THE PHENOL OXIDATION IN AQUEOUS  
SOLUTIONS VIA TOC AND COD METHODS**

Sorin Marius Avramescu, Nicoleta Mihalache, Florin Ruta, Corina  
Bradu, Ion Udrea

*4<sup>th</sup> BBCAC, 19-23 Sept., Sunny Beach, Bulgaria*

P1

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*4<sup>th</sup> BBCAC, 19-23 Sept., Sunny Beach, Bulgaria*

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*4<sup>th</sup> BBCAC, 19-23 Sept., Sunny Beach, Bulgaria*

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Belgin İZGİ

*4<sup>th</sup> BBCAC, 19-23 Sept., Sunny Beach, Bulgaria*

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Songül Karaaslan AKSU<sup>1</sup>, Şeref GÜÇER<sup>1,2</sup>

**CHARACTERIZATION OF SUDAN DYES IN FOOD SAMPLES  
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Nihan Koyuncu<sup>1</sup>, Ümran SEVEN<sup>2</sup>, Şeref GÜÇER<sup>1,2</sup>



**DETERMINATION OF FATTY ACID METHYL ESTERS,  
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Murat Kayar<sup>1</sup>, Şeref Güçer<sup>1,2</sup>

*4<sup>th</sup> BBCAC, 19-23 Sept., Sunny Beach, Bulgaria*

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Ümran SEVEN<sup>1</sup>, Güler ÇELİK<sup>2</sup>, Şeref GÜÇER<sup>1,2</sup>

*4<sup>th</sup> BBCAC, 19-23 Sept., Sunny Beach, Bulgaria*

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Aykut GULEREN

*4<sup>th</sup> BBCAC, 19-23 Sept., Sunny Beach, Bulgaria*

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Gölnur Fehmiye BİRİCİK<sup>1</sup>, Fikri BAŞOĞLU<sup>2</sup>

*4<sup>th</sup> BBCAC, 19-23 Sept., Sunny Beach, Bulgaria*

**P11**

HEAVY METAL DETERMINATIONS OF INDOOR AND OUTDOOR  
DUSTFALL DEPOSITIONS USING ICP-OES TECHNIQUE  
M.S.Dundar<sup>1</sup>, H.Altundag<sup>2</sup>, F. Ozdemir, N. Deryaoglu, Z. Karacoban<sup>3</sup>

*4<sup>th</sup> BBCAC, 19-23 Sept., Sunny Beach, Bulgaria*

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M.S.Dundar,<sup>1</sup> H.Altundag<sup>2</sup>

**LIQUID-LIQUID EXTRACTION FOLLOWED  
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Jesper Knutsson<sup>1</sup>, Pavleta Petrova<sup>2</sup>, Ian J. Allan<sup>3</sup>, Thomas  
Pettersson<sup>1</sup>, Gregory M. Morrison<sup>1</sup>



**STUDY OF THE INFLUENCE OF TEMPERATURE, EXPOSURE  
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P. Petrova<sup>1</sup>, J. Knutsson<sup>2</sup>, G. Morrison<sup>2</sup>, S. Arpadjan-Ganeva<sup>3</sup>

**PRECONCENTRATION METHODS FOR DETERMINATION AND  
SPECIATION OF THALLIUM IN NATURAL WATERS**

S. Arpadjan<sup>1</sup>, P. Petrova<sup>2</sup>, J. Knutsson<sup>2</sup>, B. Georgieva<sup>1</sup>

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*4<sup>th</sup> BBCAC, 19-23 Sept., Sunny Beach, Bulgaria*

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B. Todorov, G. Pekov, R. Djingova



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Mona Stancheva<sup>1</sup>, Lubomir Makedonski, Valentina Mihova, Albena  
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*4<sup>th</sup> BBCAC, 19-23 Sept., Sunny Beach, Bulgaria*

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LIVING IN BULGARIAN WATERS**

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**ORGANIC POLLUTANTS IN ENVIRONMENTAL ANALYSES**

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Pavlina Ivanova

*4<sup>th</sup> BBCAC, 19-23 Sept., Sunny Beach, Bulgaria*

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L. Chepanova <sup>1</sup>, I. Madgarova <sup>1</sup>, Z. Aneva <sup>2</sup>

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Margarita Milanova, Ivajlo Boevski, Nonka Daskalova

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M.I. Evgen'ev<sup>1</sup>, E.L. Gogolashvili<sup>2</sup>, I.I. Evgen'eva<sup>1</sup>

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M. I. Evgen'ev<sup>1</sup>, I. I. Evgen'eva<sup>1</sup>, P. E. Belov<sup>1</sup>, E. L. Gogolashvili<sup>2</sup>

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D. E. Efstathiou, D. L. Giokas, G. Z. Tsogas, A. G. Vlessidis



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C. Stih<sup>1</sup>, I. V. Popescu<sup>1</sup>, V. Cimpoca<sup>1</sup>, G. Dima<sup>1</sup>, C.  
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**Geta Cârâc<sup>1,2</sup>, Paula Popa<sup>1,2</sup>, Traian Florea<sup>1</sup> and  
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**TEMPORAL AND SPATIAL VARIATION OF SELECTED  
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Doina Dragan<sup>1</sup>, Simona Cucu-Man<sup>1</sup>, Raluca Mocanu<sup>1</sup>, Adrian  
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Ivajlo Boevski<sup>1</sup>, Margarita Milanova<sup>1</sup>, Nikolaya Velitchkova<sup>2</sup>, Ivan  
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Daniela Tsekova<sup>1</sup>, Georgi Gochev<sup>1</sup>, Vassil Skumryev<sup>2</sup>, Galina  
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S.Yu. Lanskaya, A.V. Bashilov

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Popa Popa<sup>1,2</sup>, Geta Cârâc<sup>1,2</sup> and Luiza Florea<sup>3</sup>

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Traian Florea<sup>1,3</sup>, Sarolta Orban Huszti<sup>2</sup> and Geta Cârâc<sup>3</sup>

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Prof. dr. chim. Olga Mitoseriu, Assoc. prof. dr. eng. Stela  
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Stanislav Bojanov, Sonja Arpadjan, Stojan Alexandrov

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AND COMPLEXES WITH MICELLES AND  $\alpha$ -CYCLODEXTRINS  
AND ITS ANALYTICAL APPLICATIONS

Aleksandra P. Chukharkina<sup>1</sup>, Andrew G. Borzenko<sup>1</sup>,  
Ekaterina M. Rekharsky<sup>1</sup>

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**Ekaterina M. Rekharsky<sup>1</sup>, Andrew G. Borzenko<sup>1</sup>, Aleksandra P.  
Chukharkina<sup>1</sup>, Michael L. Vetokhin<sup>1</sup>**

**SINGLE-DROP EXTRACTION - NEW METHOD OF COMBINED  
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**GAS CHROMATOGRAPHIC AND GAS CHROMATOGRAPHIC–  
MASS-SPECTROMETRIC ANALYSIS OF HIGH PURITY  
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**A. Pappa-Louisi<sup>1</sup>, P. Nikitas and P. Balkatzopoulou**

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**A. Pappa-Louisi<sup>1</sup>, P. Nikitas and A. Papageorgiou**

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**RESEARCH OF SELENIUM STATUS AMONG ESTONIANS BY  
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**URINARY ARSENIC SPECIATION OF MARINE MAMMALS**

Linda Kuenstl<sup>1</sup>, Simone Griesel<sup>2</sup>, Walter Goessler<sup>1</sup>



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**TOTAL MERCURY LEVELS IN HAIR IN LOW FISH CONSUMING  
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A. Gazewski, M. Trzcinka-Ochocka, R. Brodzka

**DEVELOPMENT OF A VALIDATED STABILITY INDICATING  
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**SUBCELLULAR LOCALIZATION OF ALUMINIUM AND INDIUM  
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MAAROUFI HOUCINE, AYADI AHLEM, MAGHRAOUI SAMIRA,  
TEKAYA LEILA

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**BIODIESEL PRODUCED HAZELNUT OIL FROM  
BLACK SEA REGION OF TURKEY**

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**REACTIVE DYE REMOVAL FROM TEXTILE WASTEWATER BY  
USING LOW COST NATURAL ADSORBENTS**

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**BIOSORPTION OF Cr(III), Cd(II) and Mn(II) ON FUNGUS  
(*Penicillium digitatum*) IMMOBILIZED PUMICE STONE**

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**ASSESSMENT OF SEDIMENT POLLUTION FROM A SELECTED  
AREA OF THE IRON GATES RESERVOIR**

Carmen Georgeta Hamchevici<sup>a</sup>, Liviu Nicolae Popescu<sup>a</sup>, Florentina  
Barabula<sup>a</sup>

**DETERMINATION OF THE STRUCTURE OF  
COORDINATIONSPHERE ON THE IONIC COMPLEXES BY  
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M. Taştekin<sup>1</sup>, S. Durmuş<sup>2</sup>, A. Akay<sup>1</sup>, Ü. Ergun<sup>1</sup>, E. Düzgün<sup>3</sup>, O.  
Atakol<sup>1</sup>



**THE COMPARISON ONO AND ONNO TYPE SCHIFF BASES AS  
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**ELECTROOXIDATION OF METHANOL ON MOLIBDENIUM  
COATED WITH POLYPYRROLE**

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**PREPARATION OF LEAD (II)-SELECTIVE PVC ELECTRODE  
AND ITS ANALYTICAL APPLICATION**

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**MONITORING AND ANALYZING OF GRANISETRON  
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Feyyaz ONUR<sup>22</sup>

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**QUANTITATIVE RESOLUTION OF A TERNARY MIXTURE BY  
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Erdal Dinç

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**VALIDATED METHOD FOR ROSUVASTATIN CALCIUM  
ANALYSIS IN PHARMACEUTICAL PREPARATIONS BY  
CAPILLARY ELECTROPHORESIS**

Mustafa Çelebier<sup>1</sup>, İncilay Süslü, Sacide Altınöz



**SOLID PHASE EXTRACTION AND PRECONCENTRATION OF  
URANIUM (VI) ON HUMIC ACID IMPREGNATED RESIN**

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**VOLTAMMETRIC DETERMINATION OF 3-NITROTYROSINE**  
**Ebru TÜRKÖZ, A. Nur ONAR**

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Behice Yavuz Erdoğan, A.Nur Onar

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**SIMULTANEOUS DETERMINATION OF  $\beta$  AND  $\alpha$  ODAP BY  
CAPILLARY ZONE ELECTROPHORESIS**

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**SEPARATION OF IONIC MIXTURES BY PARAMETRIC PUMPING  
WITH VARIATION OF pH**

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