

Contract no. **INCO-CT-2005-017142**

Project acronym: **RAINS**

Project title: **Romanian Action for Integrating, Networking and Strengthening the ERA -  
“Petru Poni” Institute of Macromolecular Chemistry**

Instrument: **Specific Support Action**

Thematic Priority: **Nanotechnologies and nano-sciences, knowledge-based multifunctional  
materials and new production processes and devices**

## ***D6.3a. Final activity report***

Due date of deliverable: **M37**

Actual submission date: **M47**

Period covered: from **01/05/2005** to **30/04/2008**      Date of preparation: **May 2009**

Start date of project: **01 May 2005**      Duration: **3 years**

Project coordinator: **Bogdan C. SIMIONESCU**

Project coordinator organisation: **“Petru Poni” Institute of Macromolecular Chemistry**

Draft 1

# 1. Project execution

## 1.1. Project objectives

The objectives of the RAINS Project have been developed specifically to fit seamlessly with both **scientific/technical and societal/policy objectives of the Specific Programme “Integrating and Strengthening the European Research Area”**.

- **strategic objective:** to raise the RTD standards of the “Petru Poni” Institute of Macromolecular Chemistry (PPIMC) in the specific field of ‘Knowledge-based Multifunctional Materials’;
- **overall objective:** to support the integration of PPIMC, as a centre having a critical mass enabling it to spread excellence in the mentioned research specific field, within the ERA;
- **targeted goals:**
  - (i) *to adapt the research potential of the institute to wider societal and economic needs both at regional/national and European levels;*
  - (ii) *to strengthen the cooperation with regional/national and European partners;*
  - (iii) *to increase the competitiveness and participation of PPIMC in FP projects;*
  - (iv) *to disseminate information and to facilitate communication between various scientific, educational and industrial bodies in view of full integration into the ERA;*
  - (v) *to increase the attractiveness of the research career for young people and to reduce the ‘brain drain’;*
  - (vi) *to promote full integration of women into the socio-professional environment.*

## 1.2. Contractors

The Project was developed by one partner – the « Petru Poni » Institute of Macromolecular Chemistry (PPIMC). The Institute provided the personnel and the available S&T infrastructure required by RAINS Project implementation.

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## 1.3. Methodologies/approaches

To achieve the objectives the following approaches were established and/or developed on project duration:

- A **management team** was established and involved in day-to-day management. The progress of the work was monitored by a **steering committee** composed of representatives of national/regional research units. The evaluation of the state of the art and of the impact of the project on the development of PPIMC was also supported by an **international advisory board**.
- The activities developed under the project were intended to act on all important aspects of PPIMC activity which were identified to need improvement: (a) long-term development strategy and networking, (b) human resources, (c) administrative structure, (d) research infrastructure, (e) national/international visibility.
- Research decision staff of PPIMC, young scientists, PhD students and a newly created cooperation support office were actively involved in RAINS activities.
- To efficiently use the project budget, some of the activities were jointly developed in cooperation with other programs/projects and multi-purpose activities (training, dissemination, scientific meetings) were organized.
- A large dissemination activity of project results was organized.

## 1.4. Work performed

The work performed during the three years duration of the project focused on reshaping the profile of the “Petru Poni” Institute of Macromolecular Chemistry (PPIMC) to better integrate its activity into the ERA. The goal was to establish a coherent long term development strategy and to implement this strategy in PPIMC - an institute of excellence of the Romanian Academy. The main working directions related to this goal were:

- The **strategy for long-term development of PPIMC was established** based on (a) a *self-evaluation report*, (b) *evaluation reports performed by RAINS International Advisory Board members*, (c) a *SWOT analysis* of PPIMC activity, performed considering (a) and (b). The strategy was discussed with PPIMC staff to raise awareness and commitment on the implementation of the new strategy.
- Based on the new PPIMC integration strategy, **the research and networking policy of PPIMC has been improved** and the major achievements were as follows: (a) *modern research topics* such as multifunctional (polymeric) materials, nanosized materials, multicomponent systems for bioapplications, multiresponsive polymeric materials based on natural and synthetic polymers for eco-friendly processes, computational chemistry, a.s.o. were included in PPIMC research portfolio; (b) *new knowledge and skills were acquired* through mutual exchange short-term research visits; (c) the *Cooperation Network of PPIMC was consolidated* and sustained by new *joint RTD projects* focused on high added value multifunctional polymeric materials; (d) the *expertise and skills of PhD students* and of young researchers in multifunctional polymeric materials was increased and the placement of young researchers in post-doctoral positions abroad was facilitated; (e) the *awareness and commitment* of PhD students and young researchers in FPs was continuously stimulated through their involvement in project implementation; (f) the *connection with business media* in order to increase the RTD potential of the NE Romanian Region and of the country was strengthened; (g) the *knowledge and skills* acquired – including the use of new equipments – were *shared* with regional partners.
- To improve **PPIMC research capacity**, the following objectives were defined and achieved: (a) *PPIMC rules for research staff hiring* have been established according to the system accepted in EU; (b) a *new training curricula for PhD students* was established and specialized doctoral training was organized (trainers from abroad were invited in PPIMC or PhD students and young researchers were sent and trained abroad); (c) *new research equipments* were purchased and upgrading of existing equipment was performed; (d) *young scientists and PhD students* from both PPIMC and other regional/national research and education centers were *trained on the use of new equipments and techniques*.
- To modernize the **administrative structure** and to improve the **working and living conditions** in PPIMC, (a) *PPIMC functional services* were reorganized in order to fulfil the requirements of its actual development/functioning; (b) a *Cooperation Support Office* was organized; (c) *10-12 PhD students* were selected yearly, involved in RAINS activities (including the project management) and received incentive wages.
- To **promote PPIMC, RAINS** objectives and results, and **FPs opportunities** through regional/national/international innovative environment, a *dedicated web site* was built and a number of dissemination seminars/workshops were organized in PPIMC. Dissemination was also made by participation in seminars organized outside PPIMC. *Media and TV presentation* of RAINS project and FPs were performed. To improve the perception of general public towards science and chemistry, *articles dedicated to the general public* were published.

## 1.5. Results achieved

### WP1. EVALUATION AND DEVELOPMENT STRATEGY OF PPIMC

- PPIMC integration strategy elaborated (based on self-evaluation, on-field evaluation by the international advisory board members and the SWOT analysis) / implemented

## WP2. PPIMC RESEARCH INTEGRATION AND NETWORKING

- New skills (scientific, managerial, languages, cultural) equally acquired and shared (yearly, 10-15 researchers/PhD students from PPIMC attended different international conferences abroad; yearly, 3-5 foreign scientists were hosted in PPIMC).
- Modern research topics (bio-oriented polymeric materials, polymers for opto-electronic application, supramolecular assemblies, nano-sized/structured materials, hybrid materials) developed; more than 100 scientific papers were jointly published (2005-2008) with partners from abroad.
- The cooperation network of PPIMC was enlarged:
  - new bilateral cooperation agreements with high education/research centres from France (CEMEF-Sophia Antipolis), Germany (Fraunhofer, Teltow), Ukraine (Institute of Macromolecular Compounds, Kiev), Republic of Moldova (Institute of Chemistry, Institute of Electronic Engineering, Kishinev);
  - Industrial agreements with Dacia-Renault SA (Pitesti) and with Teraplast SA (Bistrita);
  - Industrial contracts: more than 10 with Romanian companies; 2 with foreign companies: PENN Specialty Chemicals, Inc. (Canada), IVOCLAR VIVADENT AG (Zurich, Switzerland);
  - New consortia in the frame of different RTD national (more than 40 new multi-partners national ongoing projects, part of them having industrial organisations as partners) and international projects (1 FP6 and 5 FP7 projects from more than 35 proposals are under implementation; 4 new COST Actions; 2 EGIDE bilateral projects);
  - PPIMC became an active member of EuMat European platform.

## WP3. IMPROVING PPIMC RESEARCH CAPACITY

- 10 young scientists hired according to the new hiring methodology.
- New training curricula of PhD students implemented (in house training):
  - Trainers: visiting fellows from France, Poland, Sweden, UK, Turkey, professors from "Gh. Asachi" Technical University of Iasi and "Gr.T. Popa" University of Medicine and Pharmacy, Iasi, senior researchers from PPIMC, National Institute for Non-ferrous and Rare Metals (Bucuresti);
  - New courses introduced in the training curricula: 2 modules (4 courses in module 1 and 4 courses in module 2);
  - Yearly, 18-45 PhD students trained according to the new curricula.
- Yearly, 5-11 PPIMC researchers/PhD students were trained through short stays abroad.
- Yearly, 1-3 post-docs were hosted in PPIMC.
- New equipments purchased and installed: more than 20 equipments (the activity was partially financed from other sources, but all the purchased equipments were used for training activities in the frame of RAINS project).
- People trained on the use of new equipments/techniques or adjacent activities:
  - General training: yearly, more than 20 persons from PPIMC and 5-15 persons from regional partners;
  - Specialised training: more than 20 persons trained in PPIMC by the specialists of equipment suppliers; researchers trained in Italy (DSC), France and Poland (HPLC-MS), France (AFM).
- People trained on adjacent activities:
  - CSO staff (one person): Brussels (project management);
  - Researchers, PhD students, CSO staff: Iasi (one week seminar on development of communication abilities; trainer: Warren Wise, UK).
  -

#### **WP4. MODERNISING THE ADMINISTRATIVE STRUCTURE AND WORKING ENVIRONMENT WITHIN PPIMC**

- New service – Cooperation Support Office (CSO) – organized, fully functioning and integrated in the functional diagram of PPIMC.
- 1 person working in Cooperation Support Office has received a permanent position in PPIMC.
- 10-12 PhD students selected yearly were involved in RAINS activities and received incentive wages.
- A large surface (20 laboratory rooms) in PPIMC was renewed/modernized.

#### **WP5. DISSEMINATION OF PROJECT RESULTS**

- Project website periodically updated (<http://rains.icmpp.ro/index.html>).
- Two international symposia co-organized in Iasi and Grenoble together with the Academy of Sciences of the Republic of Moldavia and with l'Ecole Nationale Supérieure d'Electronique et d'Electrometallurgie, respectively.
- Eight workshops/round tables on general subjects (i.e., *FP7 opportunities. N-E Region of Romania and structural funds*), some of them being co-organized in cooperation with the National Research Agency (ANCS) and/or with partners from the regional/international PPIMC network; more than 30-50 participants in each event).
- Six one week and 7 one-two days training seminars were organized; more than 15 participants from regional partners attended each seminar.
- Actions dedicated to the general public:
  - 5 papers dedicated to the general public (3 papers published in *Academica* (Editing House of the Romanian Academy, Bucuresti);
  - 5 TV interviews, 1 TV news;
  - 6 notes published in local/national newspapers;
  - 3 Open Day actions organized;
  - 2 events dedicated to women integration organized.

## 1.5. Intention for use and impact

### ***RAINS results impact on PPIMC medium and long term development***

- modernized research profile in accordance with FPs priorities (new and innovative topics for ongoing research)
- optimized response to wider societal and economic needs
- improved human resources capacity
- improved S&T infrastructure
- improved administrative and management potential
- increased participation in international joint research projects

### ***RAINS results impact at regional/national level***

- strengthened regional/national cooperation network composed of entities having complementary expertise and interests (universities, other research centers, SMEs or other companies)
- improved research capacity of the region and of the country (a multi-user laboratory ensuring the lasting of Project results)
- increased research and innovation capabilities of RTD performers in the region and in Romania
- increased participation of RTD national partners in international joint research projects
- lasting scientific/technologic, societal, integrating effects
- increased interest of young generation for a research carrier
- increased awareness of general public towards science
- better integration of women into the professional environment

### ***European dimension of the Project***

All activities within the Project were carried out in cooperation with associate European partners, which were not Project partners but were actively involved in RAINS development. Their implication gave a European dimension to RAINS and promoted the integration of PPIMC and its national network into the ERA. The disseminating activities were sustained by the existing partnerships in the European Networks of Excellence Nano2Life and Polysaccharide.

The new joint RTD projects contribute to the direct implication of PPIMC in solving scientific, technological and societal problems at European level.

## 2. Dissemination and use

### 2.1. Exploitable knowledge and its use

According to its scope and objectives, the project was not intended to achieve exploitable results. Instead, the project results summarized in the table below were of real support in increasing the PPIMC research capacity and visibility.

Overview table

Exploitable Knowledge (description)	Exploitable product(s) or measure(s)	Sector(s) of application	Time-table for commercial use	Patents or other IPR protection	Owner & Other Partner(s) involved
1. New skills and abilities for research and research management	New expertise	Research Academic media			PPIMC and its cooperation partners
2. Use of new/upgraded equipments	New equipments	Research SMEs Academic media Other			PPIMC and its cooperation partners
3. Scientific results	High level scientific papers	Scientific European and international community			PPIMC and its cooperation partners
4. Improved working conditions	Improved working environment	PPIMC and its regional/national partners			PPIMC
5. Increased national and European networking of PPIMC	National or European consortia	PPIMC and its regional/national partners			PPIMC

#### Short description

##### 1. New skills and abilities for research and research management

This exploitable knowledge was gained following the activities described in WP2, WP3 (training for research) and WP4 (training on project management). Its target was represented by the young PhD or post-doc students and the staff of the newly organised functional office, but experienced scientists were also involved. The staffs of regional partners were also trained in transfer of knowledge seminars (WP5). The activities were organized by PPIMC as single partner; the trainers were recruited from PPIMC as well as from other research/education centres from Romania and abroad. The gained expertise will be used in PPIMC activity and, through joint projects, the using area is enlarged both at national and European level.

##### 2. Use of new/upgraded equipments

This exploitable knowledge was aimed to improve the quality of research and to increase the scientific performance. It was realized by means of activities undertaken in the frame of WP3. The activities were organized by PPIMC as single partner. After their purchase and installation, the new/upgraded equipments were dedicated to PPIMC researchers but other researchers from research institutes or universities and industrial partners were also targeted.



**3. Scientific results** were gained by using the new skills, abilities and equipments.

This exploitable knowledge was and will continue to be obtained as a fruit of the concerted effect of the activities developed in the WPs 1, 2, 3, 4, and 5. The exploitable product in this case will consist in high level scientific papers intended to contribute to the European scientific output in NMP priority area.

**4. Improved working conditions**

This exploitable knowledge is/will be the result of the efforts undertaken in the frame of WP4. Its exploitable product is the creation of an improved working environment and this experience was and will be shared with other research or academic entities.

**5. Increased national and European networking of PPIMC**






This exploitable knowledge was/will be attained particularly due to the activities of WP2 as well as WP3, WP4 and WP5. Its exploitable product is represented by more competitive consortia acting for the elaboration/winning and development of national or European projects, as well as by common scientific papers.









## 2.2. Dissemination of knowledge

### Final plan for using and disseminating the knowledge

#### 2.2.1. Overview table of past activities



Dissemination activities		Audience	Countries addressed	Participant no.	Details on the activity
Planned Date/number of actions	Delivered Date/(number of) actions				
Project presentation					
M1/1	May 14, 2005/1	Research, high education, industry	Romania	120 persons	D5.1
Project website					
M2/1	June 3, 2005 Project website released	Research, high education, industry	All countries	large	D5.2
M13-M24	Project website updated whenever necessary				D5.6
M25-M36	Project website updated whenever necessary				D5.6
Joint scientific papers					
M11/10	March 30, 2006/10 papers	International scientific community	All countries	large	D2.2
M13-M24/10	March 30, 2007/2 edited books; 46 papers				D2.2
M25-M36/10	March 30, 2007/46 papers				D2.2
International symposia					
M18/1	02-06.10.06 2 <sup>nd</sup> Bilateral Symposium on Functional Polymers, Teltow, Germany  09-11.11.06 2 <sup>nd</sup> International Conference on Biomaterials & Medical Devices – BiomMedD'2006, Iasi, Romania	  	Romania, Germany  All countries	45  more than 200	D5.3
M30/1	11-13.04.2008 First Iasi - Chisinau Bilateral Symposium: Stiinta si Cultura fara Frontiere (Borderless Science and Culture), Iasi, Romania  26-30.08.2007 8 <sup>ème</sup> Colloque Franco-Roumain sur les Polymères, Grenoble, France, Ecole Nationale Supérieure d'Electrochimie et d'Electrometallurgie de Grenoble (PPIMC, co-organizer)	 	Romanian and German research, high education, industry  All countries  International scientific community; research, high education, industry	45  more than 200	D5.3

Information workshops organized by RAINS team							
M10/2	<p>26-27.10.2005 FP6/FP7 information workshop for Institutional Contact Points (organized in cooperation with the Romanian Ministry of Education and Research) Trainers: Letitia Clara Stanila, Romanian 3 NMP NCP; Reinhold Gruber FFG/EIP, Austria</p> <p>28.11.2005 FP6/FP7 information workshop for SMEs</p>	 	Research, academic media, industry	Romania	<p>45 persons 10 pres.</p> <p>30 persons</p>	D5.3	
M13-24/1	<p>18.05.2006 New opportunities of economic development in the North-East Region</p> <p>01.03.2007 FP7, Structural Funds and Second Edition of National R&amp;D Program (PNCD II)</p> <p>14.03.2007 Workshop for Nord-Est Region: FP7 – new opportunities for research</p>	 	Research, academic media, industry, research coordinati on staff	Romania	<p>57</p> <p>about 150</p> <p>about 200</p>	D5.3	D5.5
M25-36/1	<p>12.02.2008 Training workshop: FP7 – opportunities in the North East Romanian Region</p> <p>7-8.11.2007 Polysaccharides round table</p>	 	Research, academic media, industry, research coordinati on staff	Romania	<p>80</p> <p>about 80</p>	D5.3	

<b>Workshops organised by PPIMC in cooperation with other partners</b>					
M11	<p>04.11.2005 Workshop „Best practices in FP 6”, Transilvania University, Brasov Participing persons: B.C. Simionescu, V. Harabagiu, M. Sava</p> <p>02.12.2005 Workshop „Best practices in FP 6”, Romanian Academy, Bucuresti Participing persons: B.C. Simionescu, V. Harabagiu, M. Sava</p> <p>07.12.2005 Workshop on Structural Funds, “Petre Andrei” University, Iasi Participing persons: B.C. Simionescu, M. Sava</p> <p>21.12.2005 Workshop “Romanian RTD landscape 2007-2013”, “Gh. Asachi” Technical University, Iasi Participing persons: B.C. Simionescu, M. Sava</p>	Research, academic media	Romania	<p>50 persons</p> <p>15 persons</p> <p>60 persons</p> <p>24 persons</p>	D5.5
<b>Participation to dissemination events organized by other institutions</b>					
M11/-	<p>20-21.05.2005 EUROPEAN IST Brokerage Event, Sinaia, Participating person: Rusu Teodora Target: Promoting of PPIMC and search for new partners for FP 6/FP</p> <p>10.05.2005 NANOEDUcation: Education and training on nanoscience and nanotechnology, Bucuresti Participating person: Rusu Teodora Target: Promoting of RAINS goals and presentation of PPIMC activities</p> <p>30.09-1.10.2005 Regional Innovation Forum-NE Romanian Region, Vaslui Presenting person: Rusu Teodora Target: Promoting of RAINS goals, presentation of PPIMC activities and strengthening of the regional cooperation network of PPIMC (especially with economic partners)</p>	Research, academic media, industry	Romania	<p>more than 100 persons</p> <p>more than 100 persons</p> <p>more than 50 persons</p>	D5.3

M13-24/-	<p>06.12.2006 Workshop „Cooperating in FP7. Biomedical applications of micro- and nanotechnologies, Romanian Academy, Bucuresti Attendants: G.C. Chitanu, “Polymers for biomedical applications - recent results”.</p>	Research, academic media, industry, research coordination staff	Romania	80	D5.5
	<p>11.01.2007 Workshop “A team for Europe: competing in the new European programs dedicated to micro- and nanotechnologies”, Romanian Academy, Bucuresti Attendants: G.C. Chitanu, “Development through European projects – the experience of PPIMC”</p>		Romania	more than 50	D5.5
	<p>19.01.2007 FP7 launching; Romanian Days, Bruxelles Attendants: V. Harabagiu, “Excellency in Research – “Petru Poni” Institute of Macromolecular Chemistry (PPIMC) in national and European networks“</p>		All countries	about 30	D5.3
	<p>20-21.02.2007 FP7 general information meeting and EUMAT Platform brokerage event, Leuven, Belgium Attendants: B.C. Simionescu</p>		All countries	more than 50	D5.3
	<p>22-23.03.2007 Info-and brokerage event related to the “Micro- and nanosystems” call FP7/ICT/2007, Bucuresti, Romania Attendants: G.C. Chitanu, “Petru Poni” Institute of Macromolecular Chemistry as RO-NANOMED Partner</p>		Romania	about 100	D5.3

M25-36/-	<p><i>15.11.2007</i>, NMP NCP meeting, November, Brussels, Belgium Attendants: T. Rusu</p>	Research, academic media, industry, research coordination staff	Romania	large	D5.3
	<p><i>12.03.2008</i> ERA-MORE Bridgehead meeting, Brussels, Belgium Attendants: T. Rusu</p>		Romania		
	<p><i>01.10.2007</i> Training for NCP and RCP, Constanta, Romania Attendants: T. Rusu</p>		All countries		
	<p><i>17-18.10.2007</i> ERA-MORE training on evaluation, Brussels, Belgium Attendants: T. Rusu</p>		All countries		
	<p><i>03-04.08.2007</i> Training in project management, "Gh. Asachi" Technical University Iasi and PPIMC Iasi, Romania Attendants: T. Rusu, N. marangoci</p>		Romania		

Training/Transfer of knowledge seminars						
M1-M11/3	March 6-10, 2006 Dynamic Mechanical Analysis - a Sensitive Method in Investigation of Polymeric Materials Trainer: Dr. M. Cristea, senior scientist, PPIMC	Research, academic media	Romania	53 persons	D5.4	
	March 13-17, 2006 X-ray scattering methods in polymer characterisation Trainer: Dr. D. Timpu, senior scientist, PPIMC			45 persons		
	March 27-31, 2006 Atomic Force Microscopy and Scanning Tunneling Microscopy Trainer: Dr. Silvia Alazaroaie, scientific researcher, PPIMC			26 persons		
	Aug. 21-27.05, Iasi First Summer School on Green Chemistry of Polymers (EUROGREENPOL)		Research, high education	Romania, European countries	43 students; 12 lecturers	D5.3
Sept. 2-6.05, Iasi 7-ème Colloque Franco-Roumain sur les Polymères, including a half a day workshop dedicated to the presentation of FP6 projects including RAINS and the results obtained up to the fifth month		Romania, France		102 persons 50 lectures		
M13-M24/3	11-15.09.2006 Dynamic Mechanical Analysis	PPIMC and regional partners research staff, including PhD students	Romania	33 PhD students	D5.4	
27.11-01.12.2006 Scanning Tunneling Microscopy	65					
11-15.12.2006 Thermal analysis for polymer characterisation 2 one day seminars	31					
24.01.2007 Electron Microscopy by Karl Zeiss	45					
13.02.2007 Thermal analysis – performance and applications	35					

M25-M36/3	27-28.02.2008 Wide angle X-ray diffraction in polymer characterisation	PPIMC and regional partners research staff, including PhD students	Romania	65 PhD students	D5.4
	25-26.02.2008 Application of laser systems in polymer characterization/processing			15	
	23-25.01.2008 HPLC-MS technique in structural characterisation			20	
	05-06.09.2007 Electron microscopy			18	

**Actions addressing the general public and/or to full integration of women into socio-economic environment**

M11/ 2	Sept. 2005/1 general paper April 2006/1 paper dedicated to women integration 3 TV interviews 2 notes in local newspapers	General public/women	Romania	large	D5.5
M13-24/3	2 general papers published 3 interviews published in general papers 08.03.2007 One event dedicated to women organized	General public/women	Romania	large	D5.5
M25-36/ 1 paper addressing the general public	3 short papers 1 note in a local newspaper 3 interviews on TV 1 presentation in a school	General public	Romania	large	D5.5
1 paper dedicated to full integration of women	08.03.2008 One event dedicated to women organized	Scientists and administrative staff		about 100	
1 "Open days" action	29.09.2007 PPIMC "Open day"	Research, academic media, industry, research coordination staff		about 150	



## 2.1.2. Overview table of future activities

Dissemination activities		Audience	Countries addressed	Website
Planned Date/number of actions	Delivered Date/(number of) actions			
Project presentation				
M37-M55	Project website updated whenever necessary	Research, high education, industry	All countries	<a href="http://rains.icmpp.ro/index.htm">http://rains.icmpp.ro/index.htm</a> ↓
Joint scientific papers				
M37-M55/more than 20/year	The list will be available on PPIMC website: <a href="http://icmpp.ro">http://icmpp.ro</a>	International scientific community	All countries	<a href="http://icmpp.ro">http://icmpp.ro</a>
International symposia				
M37-M55/3	First Cristofor Simionescu Scientific Symposium: Frontiers in macromolecular and supramolecular science 17-20.06.2008, Iasi	Research, academic media, industry	Romania Germany Netherlands USA	<a href="http://icmpp.ro/events.html">http://icmpp.ro/events.html</a>
	Iasi-Teltow Bilateral Symposium: Multifunctional Heterocyclic/Heterochain Polymers and Related Materials 1-7.09.2008, Iasi	Research, academic media, industry	Germany Romania	<a href="http://icmpp.ro/events.html">http://icmpp.ro/events.html</a>
	Second Cristofor Simionescu Scientific Symposium: Frontiers in macromolecular and supramolecular science 17-20.06.2008, Iasi	Research, academic media, industry	Romania Germany Switzerland Japan USA	<a href="http://icmpp.ro/events.html">http://icmpp.ro/events.html</a>
Information workshops				
M37-M55/2	Romanian research: present and future Oct. 2008	Research, academic media, industry	Romania	<a href="http://acad.ro">http://acad.ro</a>
	Workshop of Central-East European Polymer Network Dec. 2008	Research, academic media	Bulgaria Czech Republic Poland Slovenia Romania	
Training/Transfer of knowledge seminars				
M37-M55/10 seminars/year	Training on the use of new equipments/techniques followed by demonstration	PhD students from PPIMC and regional partners	Romania	<a href="http://icmpp.ro/events.html">http://icmpp.ro/events.html</a>
Actions addressing the general public and/or to full integration of women into socio-economic environment				
M37-M55/2	PPIMC Open day Sept. 2008 PPIMC Open day Oct. 2009	Large – including general public	Romania	<a href="http://icmpp.ro/events.html">http://icmpp.ro/events.html</a>

## Short description of the future activities

### (a) International symposia

#### (a1)

First Cristofor I. Simionescu Symposium

"Frontiers in Macromolecular Science"

June 17-21, 2008, Iasi, Romania

#### Scientific Program

##### Thursday, June 19

- 9.00 – 9.30  
Opening of the symposium  
– Welcome address (*Bogdan C. Simionescu*)  
– Evocation of Cristofor I. Simionescu – The Professor (*Virgil Percec*)
- 9.30 – 10.30  
Computational Studies of Soft Mater & Biomaterials: The Challenge of Bridging Length- & Time-scales to Probe Nature's Designs  
*Michael L. Klein*, Laboratory for research on the Structure of Matter, University of Pennsylvania, Philadelphia, PA, USA
- 10.30 – 11.30  
Macromolecular Architectures Inspired by Nature  
*Roeland J. M. Nolte*, Institute of Molecules and Materials, Radboud University of Nijmegen, Netherlands
- 11.30 – 12.00  
Coffee break
- 12.00 – 13.00  
Interplay of Structure and Dynamics in Macromolecular and Supramolecular Systems  
*Hans Spiess*, Max Plank Institute, Mainz, Germany
- 13.00 – 15.00  
Short visit of the Institute  
Lunch
- 15.00 – 18.00  
Tour of Iasi
- 18.00 – 18.45  
Functional Polymers – Building Blocks for Macromolecular and Supramolecular Architectures  
*Bogdan C. Simionescu*, "Petru Poni" Institute of Macromolecular Chemistry, Iasi, Romania
- 18.45 – 20.15  
Poster Session

##### Friday, June 20

- 9.00 – 10.00  
Bioinspired Synthesis of Complex Systems with Biological Functions  
*Virgil Percec*, Department of Chemistry, University of Pennsylvania, Philadelphia, PA, USA
- 10.00 – 11.00  
Supramolecular Polymers; A Modular Approach to Functional Materials  
*Bert Meijer*, Laboratory of Macromolecular and Organic Chemistry, Eindhoven University of Technology, Eindhoven, Netherlands
- 11.00 – 12.00  
Sustainability in Polymers, a Problem or an Opportunity?  
*Jos Puf*, DSM Corporation, Netherlands
- 12.00 – 12.30  
Coffee Break
- 12.30 – 13.30  
Reinterpreting the Genetic Code: Non-canonical Amino Acids in Macromolecular Design, Evolution and Analysis  
*David A. Tirrell*, California Institute of Technology (Caltech), Pasadena, CA, USA
- 13.30 – 14.30  
Biomimetic and Bioactive Polymers and Interfaces  
*Martin Moeller*, German Wool Research Institute (DWI), Rheinisch-Westfälisch Technical University (RWTH), Aachen, Germany
- 14.30 – 16.00  
Lunch
- 16.00-16.30  
Closing session

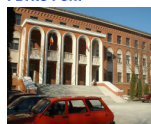


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und Mikrosensorik e.V.

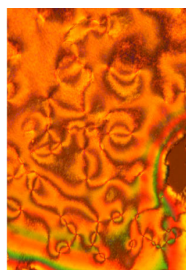
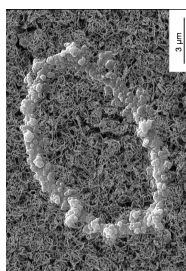


3<sup>rd</sup> BILATERAL SYMPOSIUM  
ON



# FUNCTIONAL HETEROCYCLIC AND HETEROCHAIN POLYMERS AS ADVANCED MATERIALS

September 1 - 7, 2008  
IASI, ROMANIA



## Featuring:

**Burkhard Schulz**  
Institute of Thin Film and Microsensorics Technology, Teltow, Germany  
**Joachim Stumpe**  
Fraunhofer Institute for Applied Polymer Research, Potsdam, Germany  
**Jürgen Reiche**  
University of Potsdam, Institute of Physics and Astronomy, Potsdam, Germany  
**Hans-Detlev Gilsing**  
Institute of Thin Film and Microsensorics Technology, Teltow, Germany  
**Burkhard Stiller**  
University of Potsdam, Institute of Physics and Astronomy, Potsdam, Germany

Institutul de Chimie Macromoleculara Petru Poni:

**Bogdan C. Simionescu**  
**Maria Bruma**  
**Violeta Neagu**  
**Vasile Cozan**  
**Mariana Cristea**  
**Mariana Dana Damaceanu**  
**Gheorghe Fundueanu**  
**Luminita Marin**  
**Liviu Sacarescu**

Project ROM 07/003, International Bureau of the Federal Ministry of Education and Research, Bonn, Germany

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(a3)

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## Frontiers in Macromolecular and Supramolecular Science

Second Cristofor I. Simionescu Symposium

Featuring:

- Takuzo Aida**  
University of Tokyo
- Geta David**  
Gh. Asachi Technical University, Iasi
- Daniel P. Funeriu**  
Technical University, München
- Valeria Harabagiu**  
ICM Petru Poni, Iasi
- Mike Klein**  
University of Pennsylvania
- Virgil Percec**  
University of Pennsylvania
- Jos Put**  
DSM Research, Geleen
- Ion Tiginyanu**  
Academy of Sciences of Moldova, Chisinau
- Mitsuo Sawamoto**  
Kyoto University
- Dieter A. Schlüter**  
ETH, Zürich
- Mircea Teodorescu**  
Polytechnic University, Bucharest
- Eiji Yashima**  
Nagoya University

Conference Location  
Petru Poni Institute of Macromolecular Chemistry  
Aleea Grigore Ghica Voda 41\*  
700487 Iasi Romania

date: June 2-3, 2009  
time: 9:00 am – 6:00 pm  
place: Petru Poni Institute of Macromolecular Chemistry

More information contact:  
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*(b) Information workshops*

**SEMINAR**

**CERCETAREA ROMANEASCA –  
INTRE PREZENT SI VIITOR**

**Teme de actualitate - dezbateri**



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SI SCHIMBURI CULTURALE  
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IASI**



**24-25 octombrie 2008**

**Biblioteca Institutului de Chimie Macromoleculara "Petru Poni"**