Research Team name: **Colloid Chemistry Group, Novi Sad, Serbia**
Presenter name: **Dr. Jaroslav Katona**

Team Presentation – Annual Workshop, COST Action MP1106
Dublin, September, 2012

Team's general info

Research Team Name: Colloid Chemistry Group, Novi Sad

Number of team members: 5 (+2)

- Dr. Lidija Petrovic, assist. Prof.
  - Pharmaceutical engineer
- Dr. Jaroslav Katona, assist. Prof.
  - Food engineer
- MSc Jadranka Milanovic, PhD student
  - Pharmaceutical engineer
- Tamara Erceg, MSc Student
  - Food engineer
- Slobodan Tanasin, technician




Relevance to MP1106

Research interests related to MP1106:

- (Micro)encapsulation
  - Polymer-surfactant interactions
    - Coacervation
  - Emulsions (double, nano)
- Drop formation in high frequency processes
  - Inkjet
- Metallic inks for printed electronics applications
  - Low-temperature sintering

Lab description

Basic facilities, equipment, devices etc.:

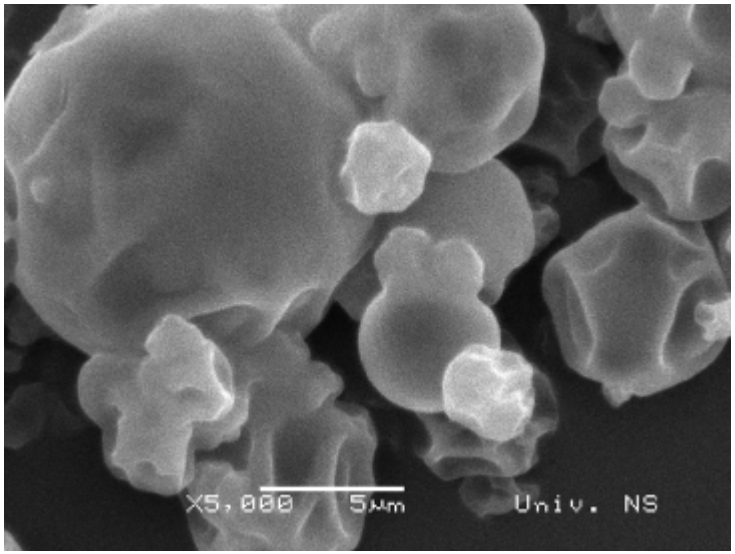
- Rheometer, Rheostress 600 HP, ThermoHAAKE, USA
- Mini Spray Dryer, Buchi 190, Switzerland
- Tensiometer, Sigma 703D, KSV, Finland
- Microfluidizer, M-5000, Microfluidics Corp., USA
- Zetasizer Nano ZS, Malvern Instruments, UK
- Ultraturrax T-25, Janke-Kunkel, Germany
- Optical microscope, Leica
- Conductometer

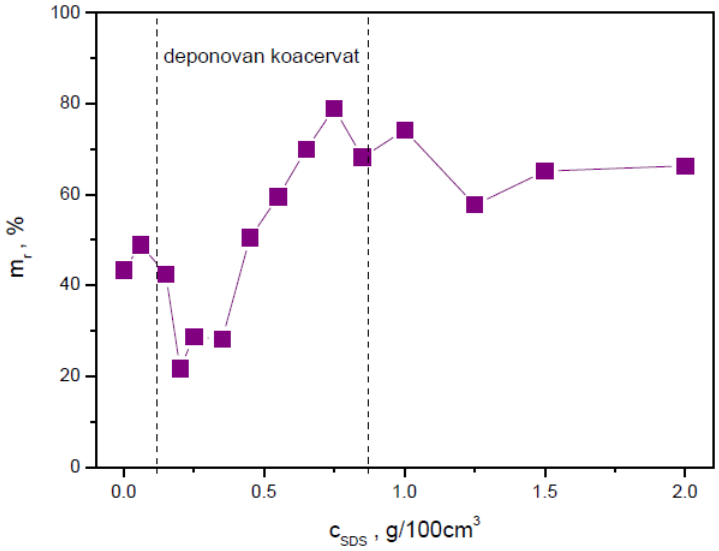
Projects

#1 project :

Title: **Microencapsulation of vegetable oils**
Duration: 2007-2011
Funding organization: Ministry of Science, Republic of Serbia
People involved and their function: 2 PhDs
Most interesting results:

- •Coacervate shells of controlled permeability
  - •HPMC, NaCMC, SDS



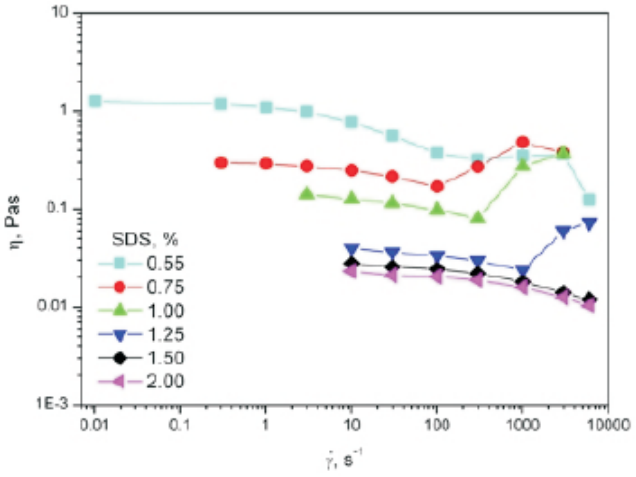


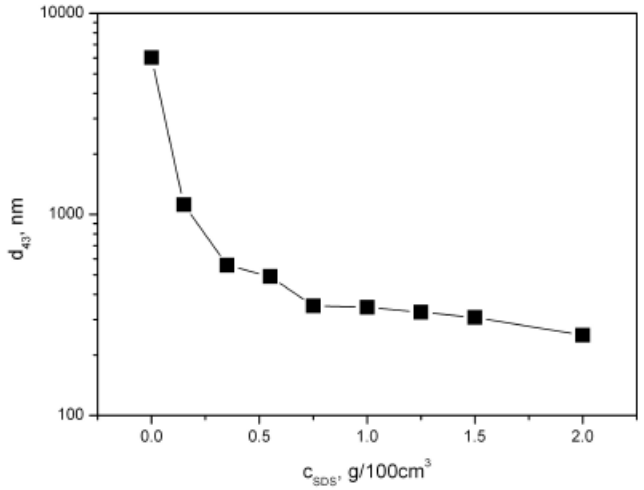
Projects

#2 project :

Title: **Encapsulation of bioactive food components in emulsion systems**
Duration: 2011-2014
Funding organization: Ministry of Science, Republic of Serbia
Most interesting results:

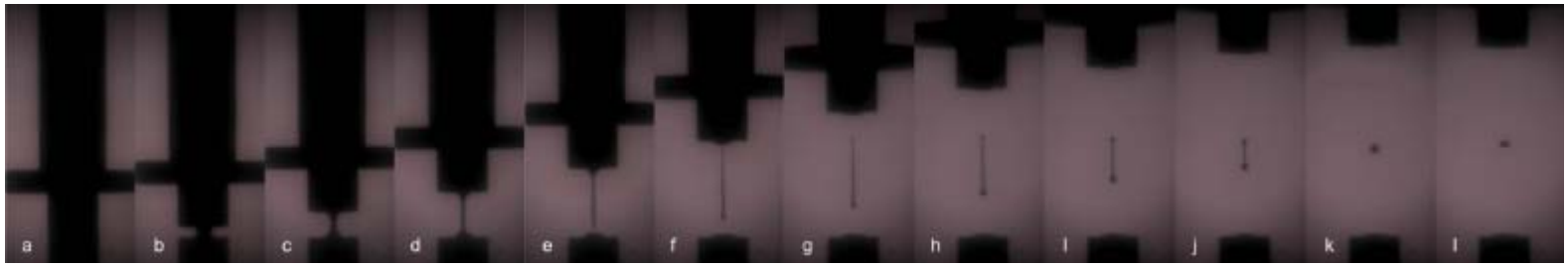
- Protective shell with antioxidant, coacervation
- Employing polymer-surfactant interactions for preparation of submicron emulsions

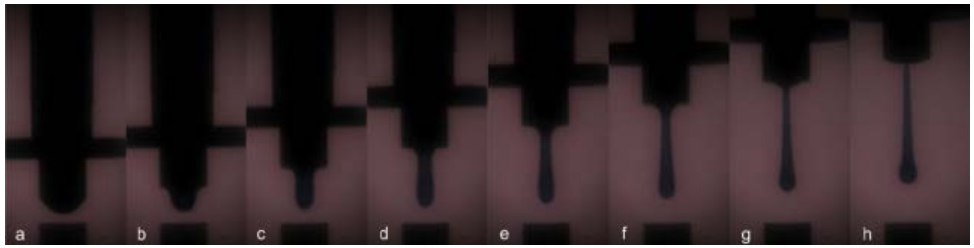


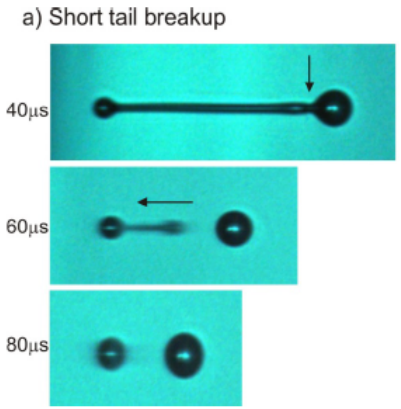


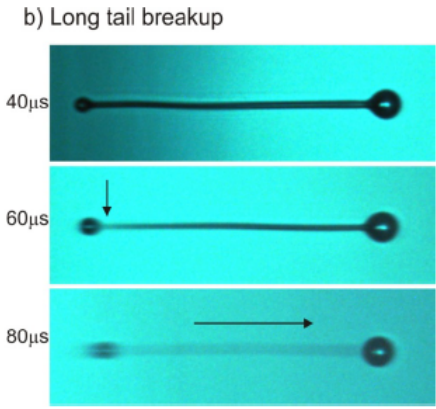
Projects

#3 project :
Title: **Drop formation in inkjet process**
Duration: 2007-2009
Funding organization: Agfa Gevaert N.V., Belgium
People involved and their function: 1 PhD, 5 MSc
Facilities/equipment: CaBER, Vision-Jet platform, Agfa's infrastructure
Most interesting results:









Projects

#4 project :

Title: **Low-temperature sinterable Ag nanoparticles for printed electronics applications**

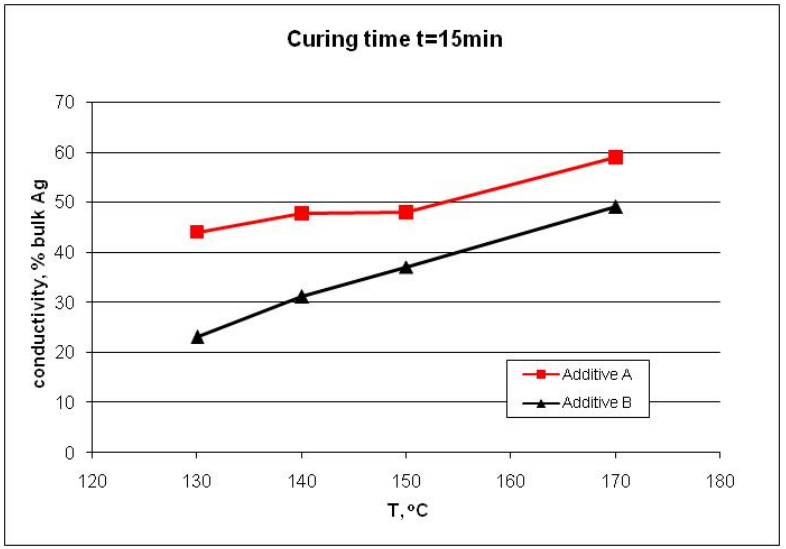
Duration: 2011-2012

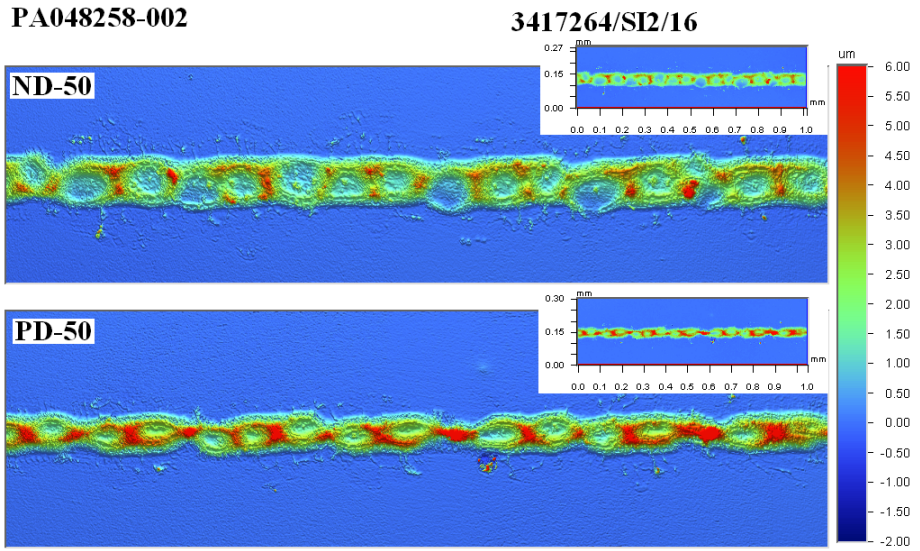
Funding organization: Agfa Gevaert N.V., Belgium

People involved and their function: 1 Post-doc

Facilities/equipment : Agfa's infrastructure

Most interesting results:





Topics for Research Proposal

#1 Topic

Title: Encapsulation of bioactive compounds

Topics for Research Proposal

#2 Topic

Title: Metallic inks for printed electronics applications

- Low-temperature sintering

Topics for Research Proposal

- Applied research
  - Encapsulation technologies
  - Printing as a deposition technology
    - Formulation of specialty inks
  - Conductive metallic inks for PE
  - Functional products/materials (foods, cosmetics, textile etc.)

Thank you for your attention