



## Dr. Ionel Adrian Dinu

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### Research topics

- **Stimuli-responsive (co)polymers and amphiphilic block copolymers** synthesized by ionic and controlled radical polymerization;
- **Self-assembly** of amphiphilic block copolymers and **self-organization** of natural and synthetic (co)polymers (including polyelectrolytes) in aqueous media;
- **Chemical modification of polymers** by post-polymerization reactions on pre-existing functional groups and **surface modification of self-assembled nanostructures**;
- **Functionalization of polymer flocculants and sorbents** for improving the removal efficiency of pollutants (metal ions, dyes, pesticides, colloidal particles and droplets) from wastewaters;
- **Polymer-based nanoreactors and nanocarriers** with stimuli-triggered activity for biomedical, food and environmental applications.

### Scientific research

Author and co-author of 17 scientific papers (15 articles in ISI-ranked journals), 5 book chapters, 3 articles as proceedings in scientific volumes, 4 lectures (2 invited, 1 plenary and 1 keynote), over 35 participations at national and international scientific meetings with oral communications and posters, 1 award for a poster presentation (Torun. Poland, 2010), and 6 participations as team member in national/international research grants. **Author output:** h-index = 8; citations = 191 Scopus, 178 Web of Knowledge; cumulative impact factor 2016 = 63.75 (Web of Knowledge).

### 6 most relevant publications

1. M. V. Dinu, I. A. Dinu, M. M. Lazar, E. S. Dragan  
**Chitosan-based ion-imprinted cryo-composites with excellent selectivity for copper ions**  
*Carbohydrate Polym.* 186 (2018) 140-149.  
<https://doi.org/10.1016/j.carbpol.2018.01.033>
2. I. A. Dinu, J. T. Duskey, A. Car, C. G. Palivan, W. Meier  
**Engineered non-toxic cationic nanocarriers with photo-triggered slow-release properties**  
*Polym. Chem.* 7 (2016) 3451-3464.  
<https://doi.org/10.1039/c6py00343e>
3. T. Einfalt, R. Goers, I. A. Dinu, A. Najer, M. Spulber, O. Onaca-Fischer, C. G. Palivan  
**Stimuli-triggered activity of nanoreactors by biomimetic engineering polymer membranes**  
*Nano Lett.* 15 (2015) 7596-7603.  
<https://doi.org/10.1021/acs.nanolett.5b03386>
4. M. Lomora, F. Itel, I. A. Dinu, C. G. Palivan  
**Selective ion-permeable membranes by insertion of biopores into polymersomes**  
*Phys.Chem.Chem.Phys.* 17 (2015) 15538-15546.  
<https://doi.org/10.1039/c4cp05879h>
5. E. S. Dragan, I. A. Dinu  
**Solution behavior of progressively quaternized poly(dimethylaminoethyl methacrylate) as a function of charge density**

*Eur. Polym. J.* 47 (2011) 1065-1072.

<https://doi.org/10.1016/j.eurpolymj.2011.02.012>

6. I. A. Dinu, M. Mihai, E. S. Dragan

**Comparative study on the formation and flocculation properties of polyelectrolyte complex dispersions based on synthetic and natural polycations**

*Chem. Eng. J.* 160 (2010) 115-121.

<https://doi.org/10.1016/j.cej.2010.03.018>