

## Responsive Amphiphilic Polymers: Design and Functions

**Françoise M. Winnik<sup>a, b</sup>**

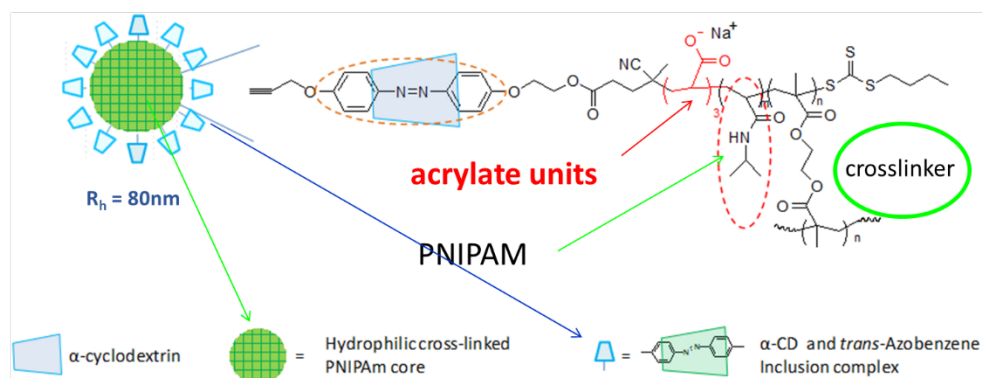
<sup>a)</sup> Department of Chemistry, University of Helsinki

<sup>b)</sup> International Center for Materials Nanoarchitectonics, National Institute for Materials Science, Japan

Amphiphilic polymers are used in many industrial process, as components of oil recovery fluids, paints, or emulsifiers. They are also part of daily life in cosmetics, foods, and drug formulations. Structurally, they all contain hydrophobic and hydrophilic sections. The art and science in this field reside in the fine design of the composition, architecture, and size of the macromolecule. I will present simple design rules, with emphasis on responsive materials

Corresponding author e-mail francoise.winnik@helsinki.fi

### Thermo/photo/pH sensitive PNIPAM nanogels

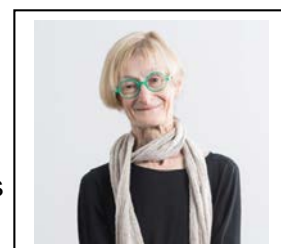


#### Author Biography:

Name: Françoise M. Winnik

University/Institute: University of Helsinki, Finland

Research Interest: self-assembly of amphiphilic polymers, nanoparticles and biointerfaces



Françoise M. Winnik was born and educated in France. She obtained her PhD in chemistry from the University of Toronto (Canada). She worked as a research scientist in the Xerox Research Center of Canada, before joining McMaster University in Hamilton (Canada) in 1993 as an Associate Professor and, from 2000 to 2018, the Université de Montréal, Montreal, Canada as a Professor. She is currently a Professor in the University of Helsinki, Finland. She is a Principal investigator, Helsinki satellite, of the International Center of Materials Nanoarchitectonics of the National Institute for Materials Science in Tsukuba, Japan. She is editor in chief of *Langmuir*, a journal of the American Chemical Society. Her research interests include self-assembly of amphiphilic polymers, nanoparticles and biointerfaces.