Collaborations with Industry

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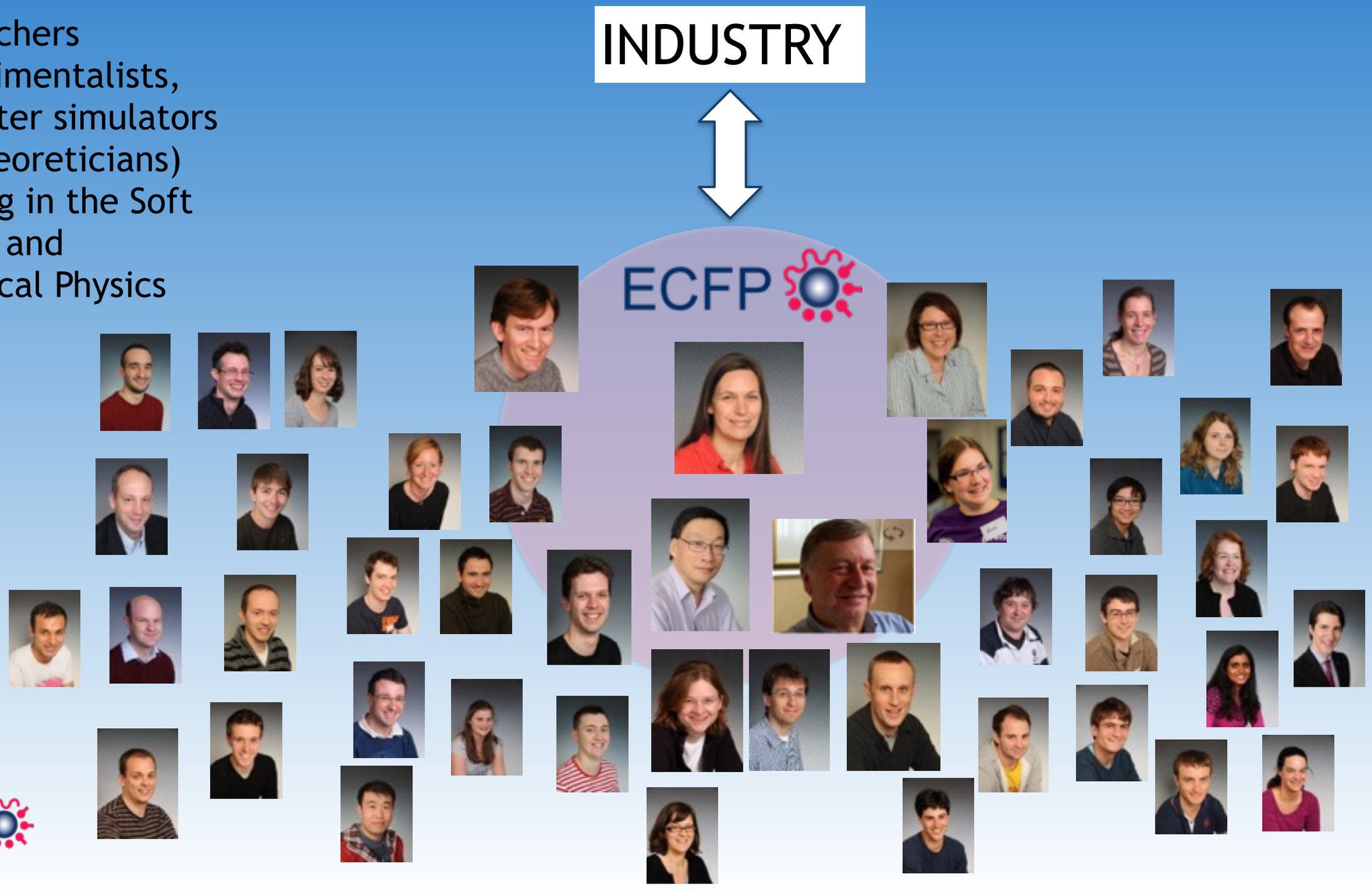
Outline

- Background to my role
- Why collaborate with industry
- Finding industrial partners
- Funding for industrial work
- Starting a project
- During the project
- Closing a project

What is ECFP?

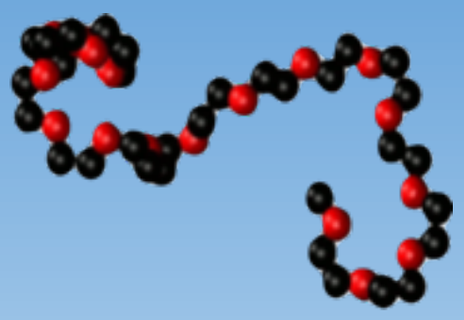
Researchers (experimentalists, computer simulators and theoreticians) working in the Soft Matter and Biological Physics Group

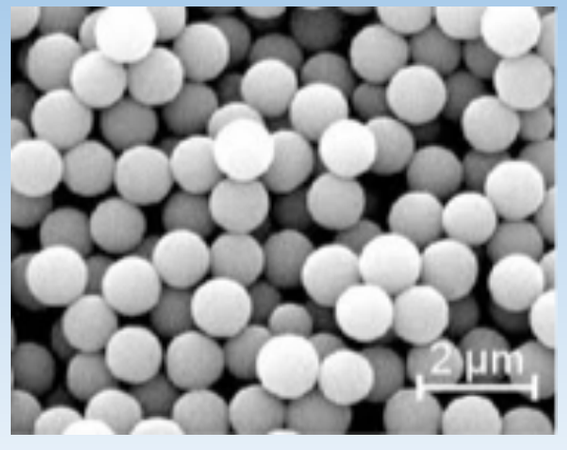


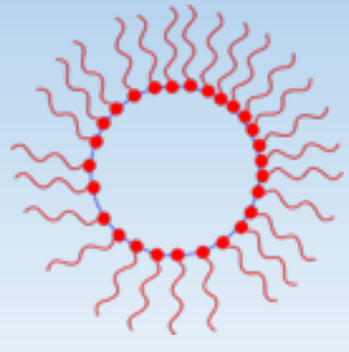
ECFP

What do Soft Matter Physicists Do?

Seek generic principles that govern the interactions and dynamics of "*mesoscopic*" components (independent of chemical detail)





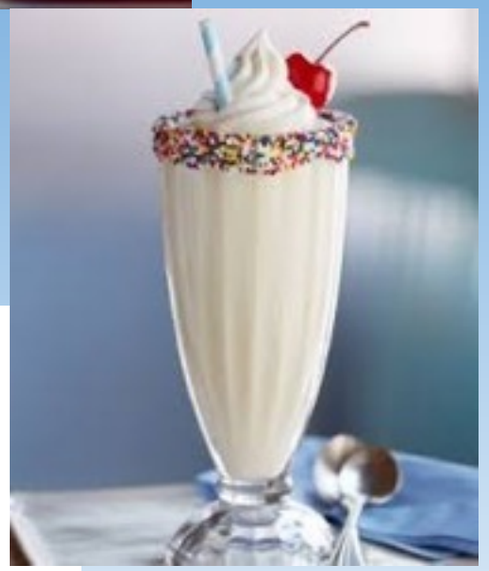


ECFP

What are formulations

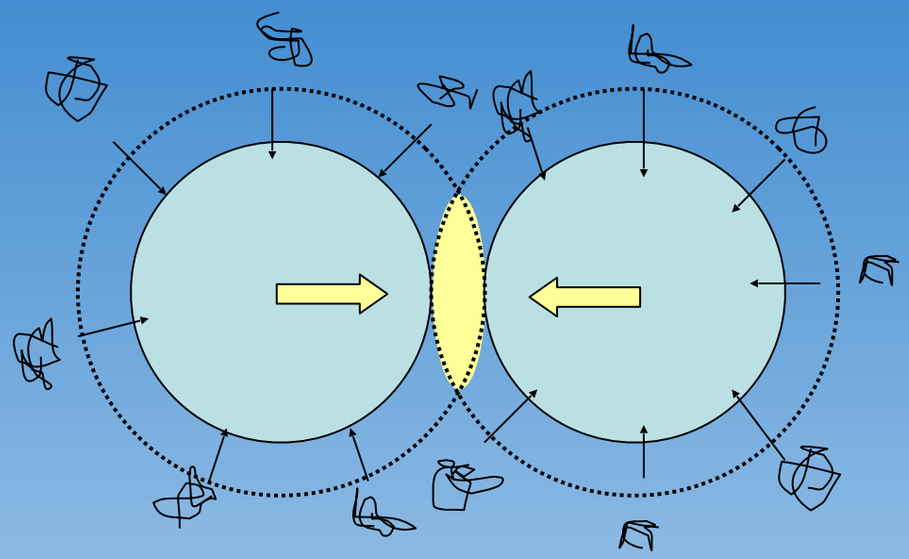
A mixture or structure prepared according a **specific** procedure and formula /recipe

are soft materials

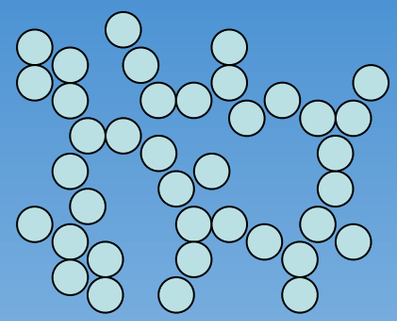


were soft materials

A generic principle in Action



depletion



colloid network

Phase separation

This is a *generic* phenomenon, depletants can be:

non-absorbing polymers
nanoparticles
surfactant aggregates (micelles)
globular proteins

Ratio of size drives strength of interaction

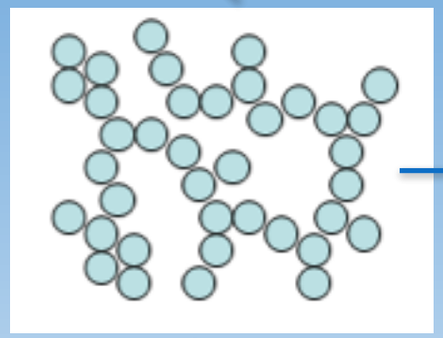
ECFP

The power of generic principles

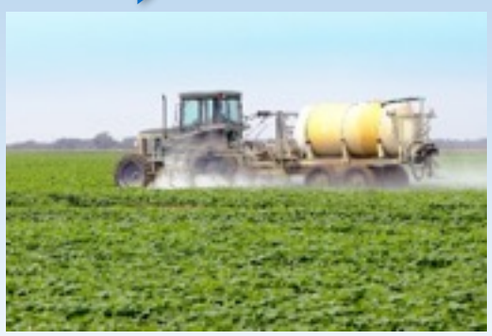
Milkshake

Personal Care Products

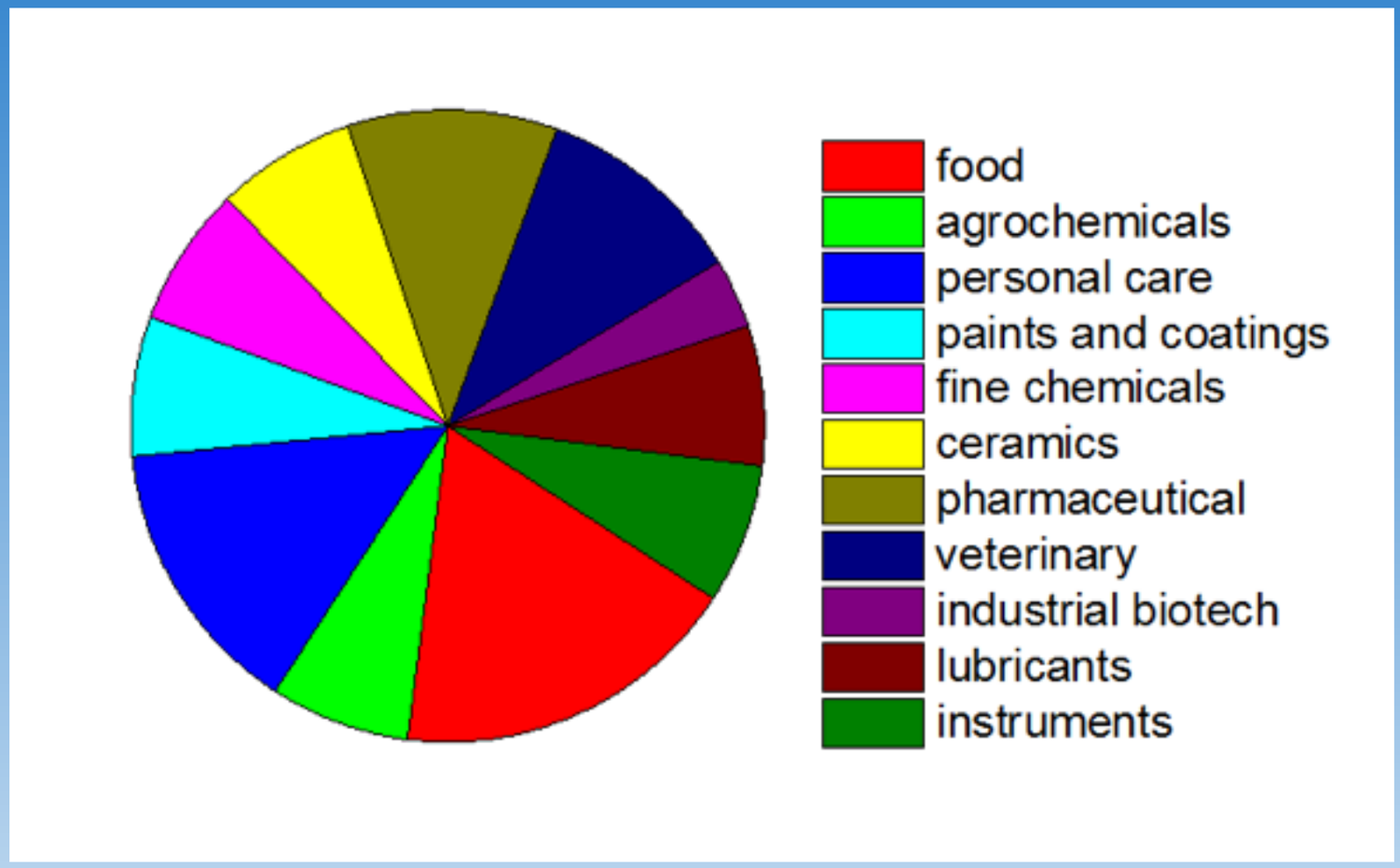
Paints



Agrochemical

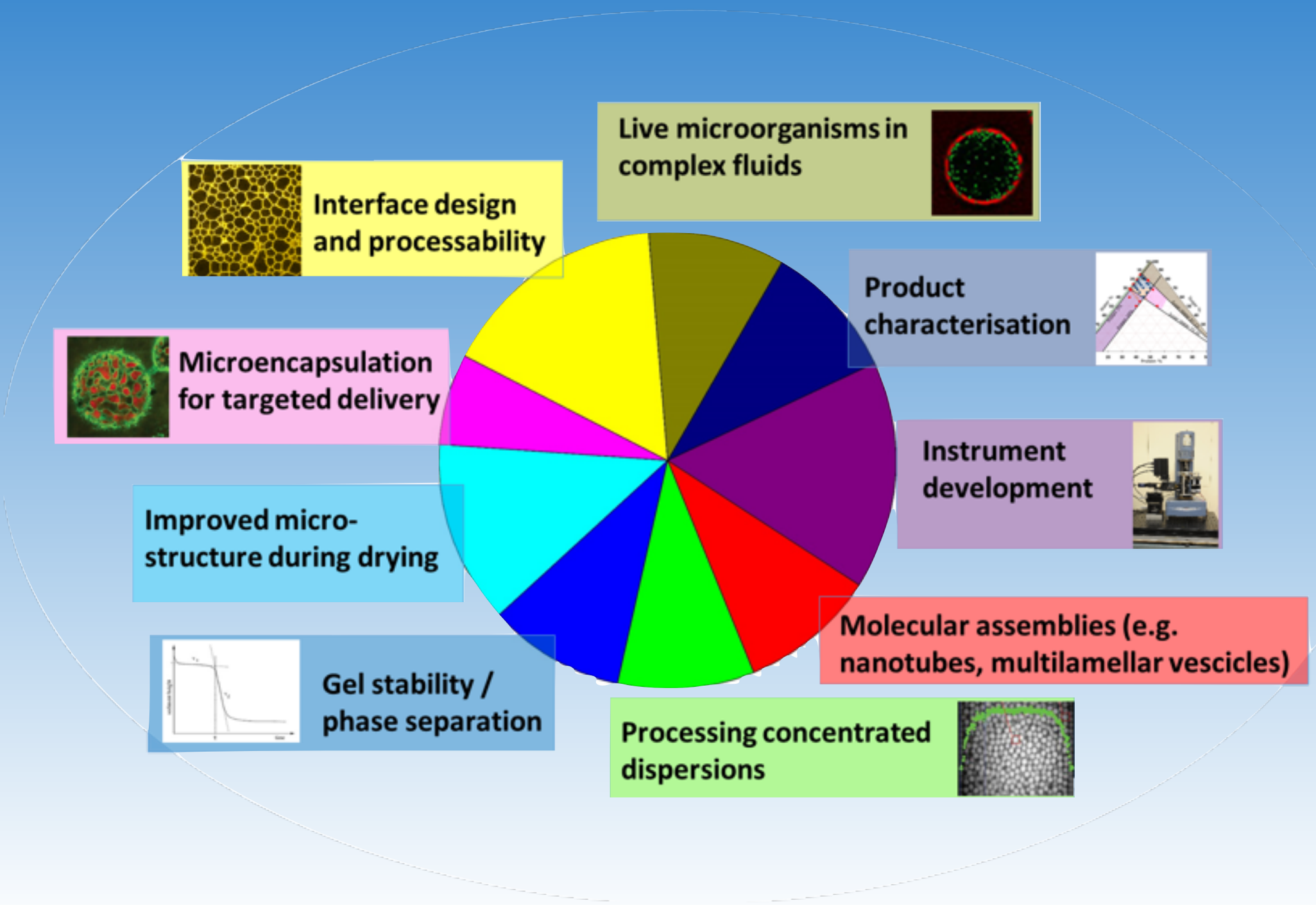


ECFP Experience



Founded in 2012 to deliver ‘impact’ from research, ECFP worked with 28 companies within 4 years, 17 of which are multinationals. Currently overwhelmed by commercial interest!

Types of Projects



Generic Principles

Although ECFP is only one area of physics, the generic principles can be applied across the field. In the rest of the talk I'll give a much more generic view on industry collaboration

Why Collaborate with Industry?

Similar to any other collaboration

Materials

Kit

Apply science to the “real world”

Different perspectives on the science

IMPACT!

Finding Partners - be proactive!

Existing Contacts

Your PI may already be getting requests to collaborate and/or have existing industrial collaborations. Ask to be involved. Often they don’t have time to respond to as many requests as they receive, offer to help.

Organisations who can help

Innovate UK

European Commission

Your university research office

Interface
The knowledge connection for business

KTN
the Knowledge Transfer Network

Local knowledge exchange coordinator

Events

Various types of events

Conferences

Industry focused conferences

Special interest meetings

Innovation network events

H2020 brokerage

At Events

Talk to people you don’t know!

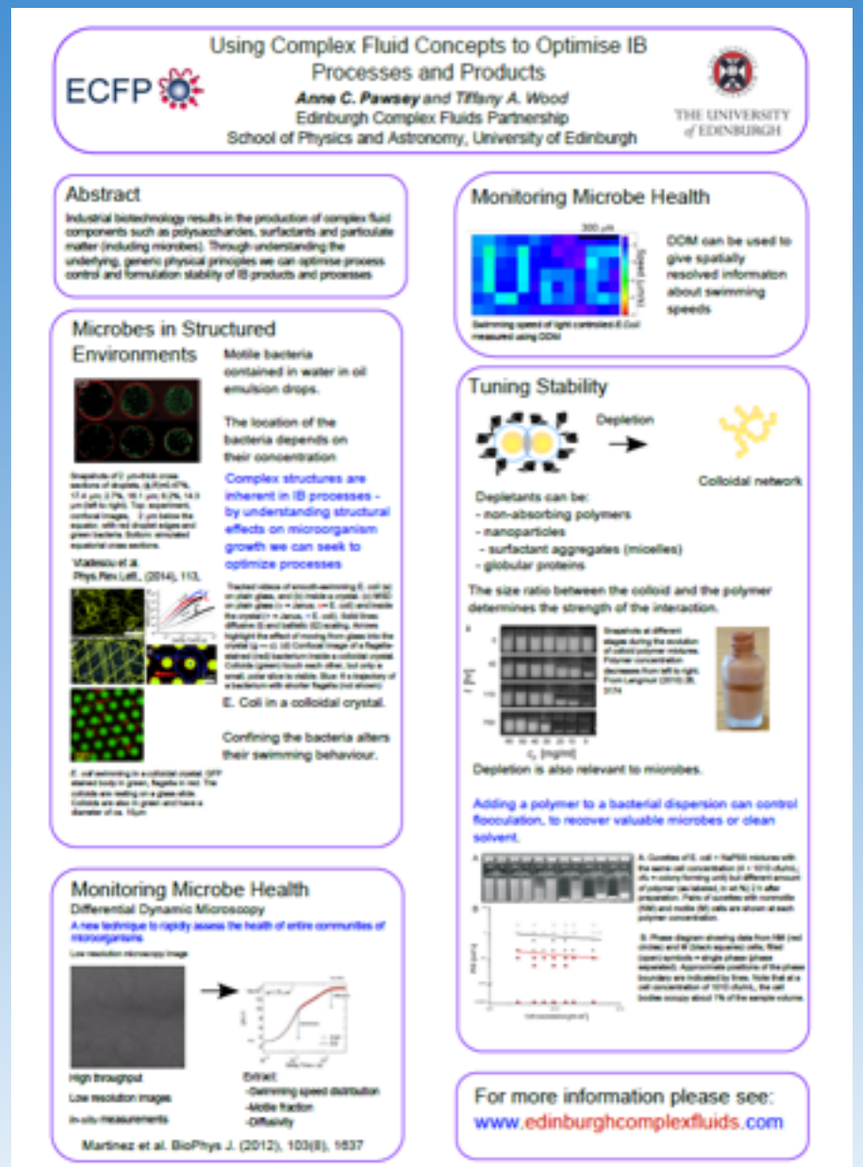
This isn’t necessarily easy.

Be generous, talk to them about their work, ask questions, listen to the responses, talk about a colleagues work if yours isn’t directly relevant.

After the event it’s ok to feel tired, take some time to yourself if you need it.

Events

- Take a poster or give a talk
- Exhibit (costs money)
- Take:
  - Business cards
  - Paper copies of poster/ papers
  - Note book and pen
- Don’t lose the attendee list!



Events

- Consider running your own
  - A good way to involve the wider research group
  - Can show off your facilities
- Invitations
  - Be pro-active:
  - search for local companies who do relevant work, contact information points for company lists
  - Call the companies and ask to speak to someone in product development, tell them about your event, the science behind it, and why it could be worth their time.

Follow up!

Find the business cards you collected!

Send emails,

Attach relevant papers/a copy of your poster…

Funding Sources

Innovate UK

THE ROYAL SOCIETY OF EDINBURGH

European Commission

Interface
The knowledge connection for business

Often need a contribution from the company, can be “in kind”
RSE and RS different, fund industry fellowships for researchers to work with an individual company…

THE ROYAL SOCIETY

KTN
the Knowledge Transfer Network

EPSRC
Engineering and Physical Sciences Research Council

Jargon

- TRLs (Technology Readiness Levels) are possible the most important ones to know about

- 1-3 Academia

- 5-7 Industry R&D

- 4-6 Valley of despond. There is often funding to help get through this bit.

Consulting

the company pays all the money and controls everything about the project

Beginning (what Kate said…)

Decide what you are going to do,

write down work packages, look for sources of funding or create a consultancy agreement (your research office should handle the legal stuff!)

Agree what the deliverables will be (report, recipe images etc)
Expectation management, be clear what you can and can’t deliver
Avoid over promising
Agree how you will keep the company updated, e.g. email interim reports, phone calls, meetings…
Make sure the frequency works for both parties.

During the project

Keep the company updated

Make sure you agree on what you will do

refer back to the original agreement

There may be tension between what is scientifically interesting and what the company wants

Try not to work for free!

Finishing the project (not the end…)

Deliver what you agreed

Suggest future work packages (if you thought of ideas along the way you'd be interested in, this is the time to propose them)

If you have a good relationship with the company ask them to write supporting statements for grants relevant to their work!

Keep in touch after the end of the project.

Conclusions

IS about interesting science
IS enjoyable
but DIFFERENT to pure research