

## Food & Biomaterials Research Group

### EPSRC Centre for Innovative Manufacturing in Food

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# Optimising food composition:

## Fat, sugar, salt and fibre



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- **Oil bodies as natural emulsions**

- Sustainable seed processing (no organic solvents)
- Maximise nutritional value & oxidative stability (e.g. unsaturated fatty acids & Vitamin E)



- **Green leaf plant tissue**

- Nutrition: n-3 fatty acids, Vitamins A, C & E
- Umami (potential)



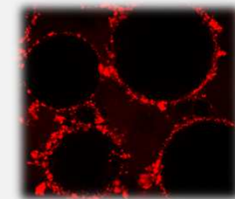
- **Oleogels**

- Fat continuous product structuring
- o/w emulsion structuring



- **Replacing fat with water or fibre**

- Particle stabilised emulsion technology



- **Structuring foods with plant cell wall material**



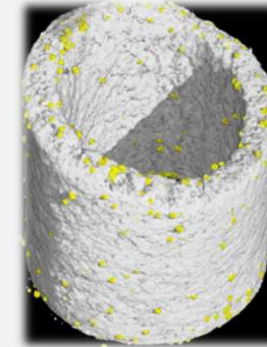
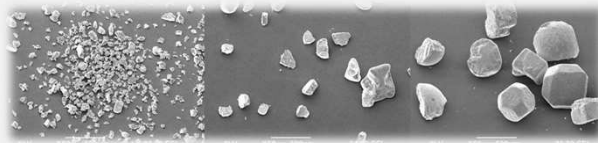
# Optimising food composition: Fat, **sugar**, **salt** and fibre



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- **Low moisture/dehydrated foods**
  - Crystal size to maximise perception



- **High moisture foods**
  - Encapsulation and release
  - Choice of thickener to maximise perception



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Rebalancing aroma delivery post salt/sugar/fat removal.

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Disruptive technologies to remove dependence on salt for texture generation.