## Colloid Science: from

### magnetism to novel materials



#### Laura Rossi

#### Soft Matter group

Viva Fysica!

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#### What are colloids?







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#### MATERIALS:

INORGANIC PLASTIC METALS SEMICONDUCTORS





### Little building blocks



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#### Kitchen salt

Opals



ALC: UNK









### Colloidal assembly



#### Directionality!







Z. Zeravcic et al. PNAS 2014; 111, 15918-15923

# Promising techniques



### Magnetic interactions





**ATTRACTION** 























#### Starting point: HEMATITE





#### TINY MOVING MAGNETS







#### Colloids with magnetic patches





#### Magnetic directional assembly







#### Conclusions





## Colloids are fun!!!











#### Interested?



Contact me!

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