

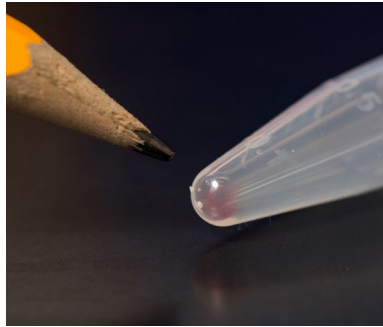
# DNA data storage update

Karin Strauss, Microsoft Research



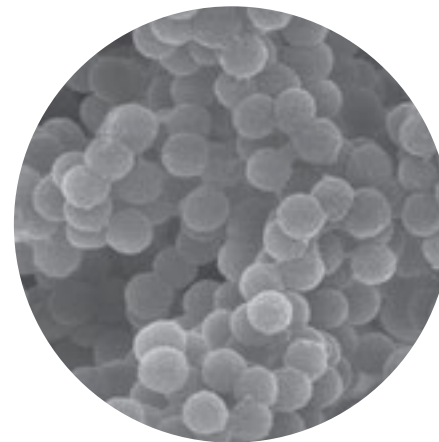
# Why DNA?

## Density



Credit: Tara Brown Photography / University of Washington

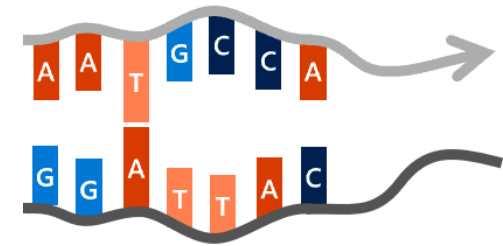
## Durability



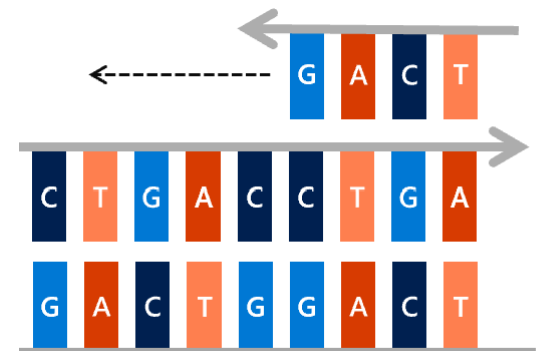
## Relevance



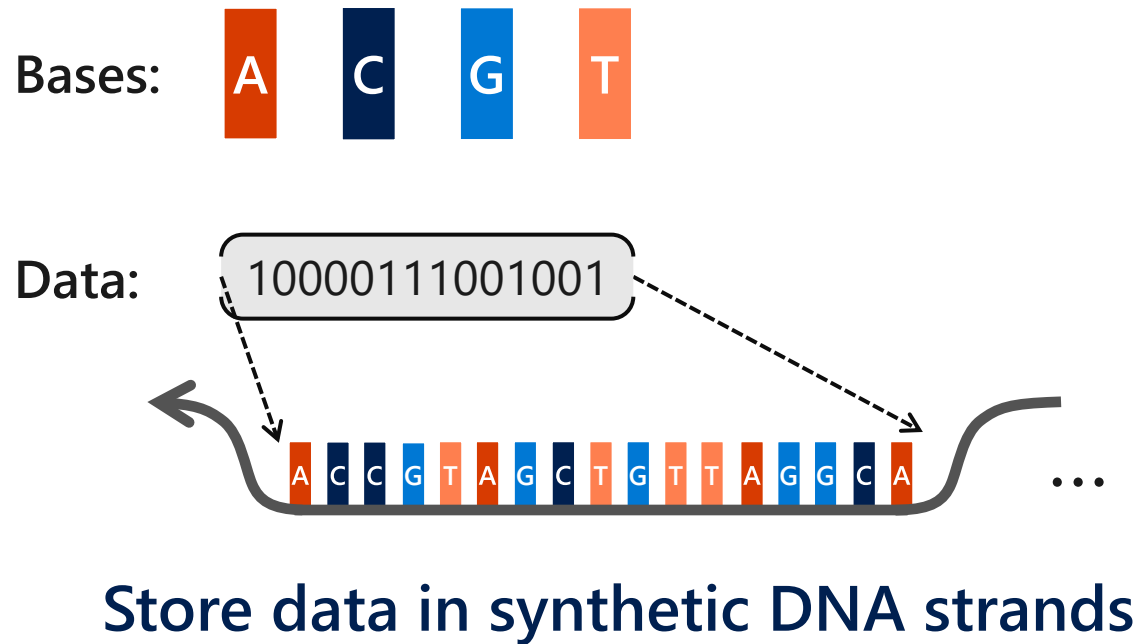
## Computation



## Copies



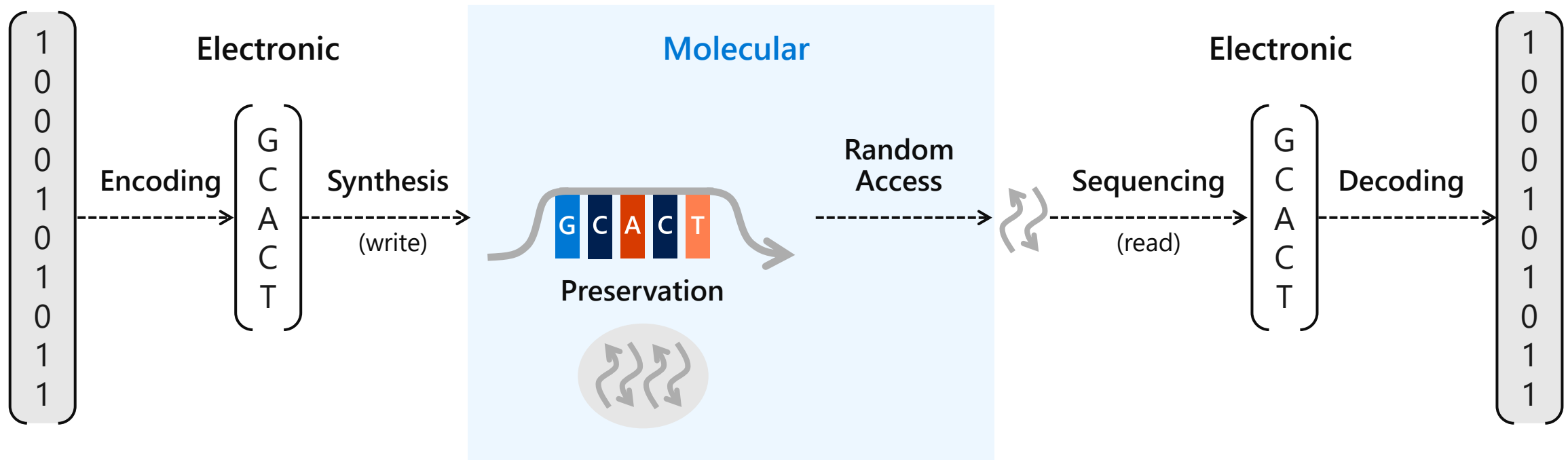
# DNA data storage basics



Simple mapping:

Bits	Base
00	A
01	C
10	G
11	T

# DNA storage end-to-end system

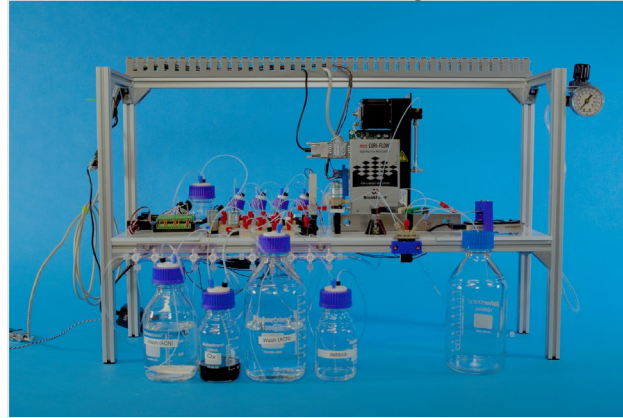


# Previously featured...

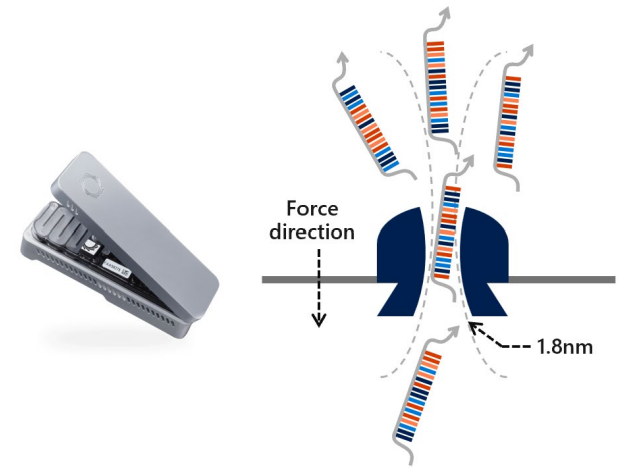
Codec: 1GB



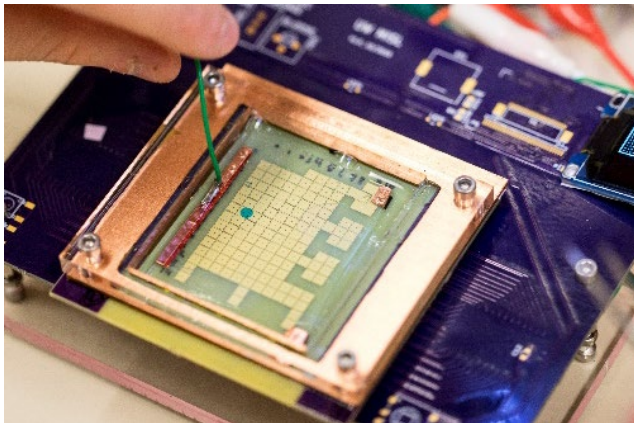
End-to-end system



Nanopore readout



Library automation



Molecular similarity-based search



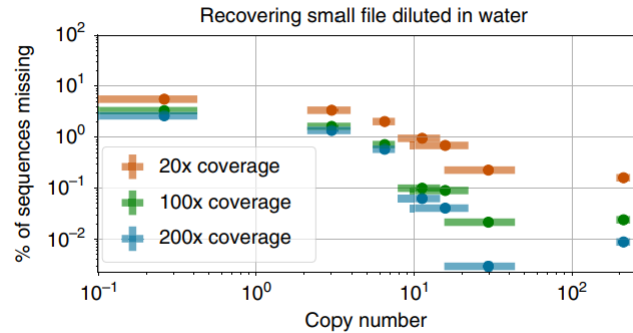
Query



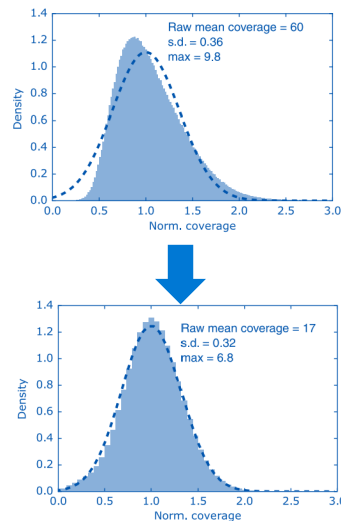
Results

# New since last meeting

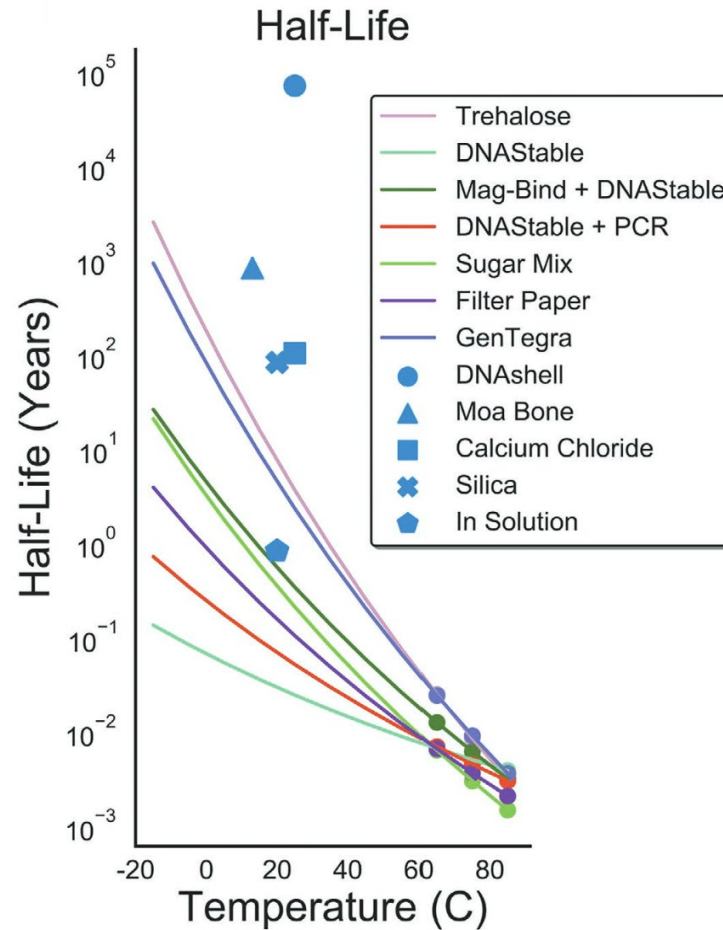
## Physical recovery limits



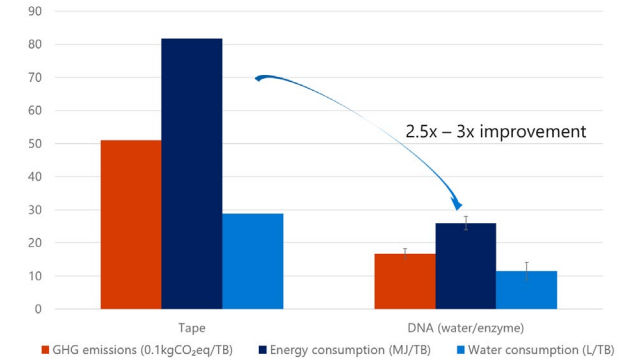
## Bias sources



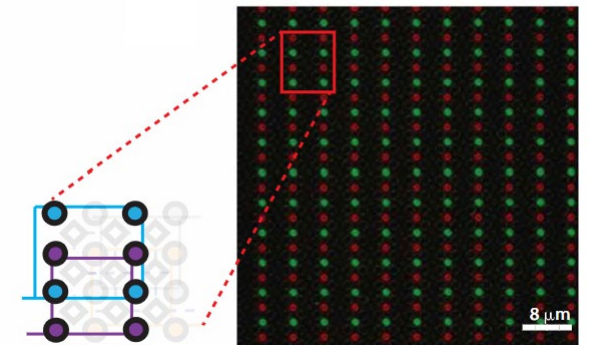
## Preservation study



## Sustainability study



## Scaling synthesis



# DNA Data Storage Alliance

<https://dnastoragealliance.org/>



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## DNA DATA STORAGE ALLIANCE

Our mission is to create and promote an interoperable storage ecosystem based on DNA as a data storage medium

LEARN MORE

Website launched



Preserving our Digital Legacy: An Introduction to DNA Data Storage

Our first whitepaper will give you a good overview of DNA Data Storage technology and the need for a new archival storage medium that will help with the explosive growth of digital data.

First whitepaper published

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Our members are our DNA

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<b>Molecular Assemblies</b> Molecular Assemblies Molecular Assemblies is a leading provider of DNA data storage solutions for businesses and individuals. Our products are used by millions of people worldwide.	<b>PFU</b> PFU PFU is a leading provider of research and education services for the United States.	<b>BIOQS2</b> Quantitative Scientific Solutions Quantitative Scientific Solutions is a leading provider of research and education services for the United States.	<b>Quantum</b> Quantum Quantum is a leading provider of research and education services for the United States.	<b>Lab4I3C</b> Lab for intelligent storage & computing @ ODU The Lab for intelligent storage & computing @ ODU is a leading provider of research and education services for the United States.	<b>MilliporeSigma</b> MilliporeSigma MilliporeSigma is a leading provider of research and education services for the United States.	<b>FUJIFILM</b> Fujifilm Fujifilm is a leading provider of research and education services for the United States.	<b>BioEcho Life Sciences</b> BioEcho Life Sciences BioEcho Life Sciences is a leading provider of research and education services for the United States.
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Questions?