

MicroTAS Art in Science Award

“To draw attention to the aesthetic value in scientific illustrations while still conveying scientific merit.”

Award Committee:

Harp Minhas (RSC), Albert Folch (UW),
Darwin Reyes (NIST)

Why Art in Science?



#1. Art Is Enjoyable

“Microfluidic River”
Greg Cooksey & Albert Folch

Bringing Art Into Science and Technology (BAIT)



Microfluidic River

Greg Cooksey, Anthony Au, and Albert Folch

Fluids do not mix well in microfluidic-scale containers. When two or more fluids flow in parallel streams, they are so constrained by the nearby walls that turbulence is virtually impossible, yielding a characteristically stable flow pattern termed "laminar flow." This image shows a laminar flow of various streams of food coloring dye entering the upper right corner of a chamber and expanding in all directions. Since turbulence is absent, the dyes can only mix by diffusion which occurs relatively slowly with respect to the speed at which the dyes are flowing. The black diagonal band between the blue and the red streams is the result of mixing by diffusion. The tubes are milled with precision-milled silicon (or PDMS, a transparent silicone rubber) and contain a real microfluidic device. This picture inspired the background of the brochure for the traveling exhibit "BAIT" which attempts to capture the essence of aesthetics in science through scientific imagery.

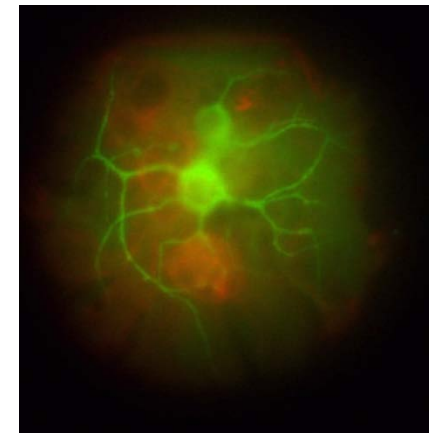
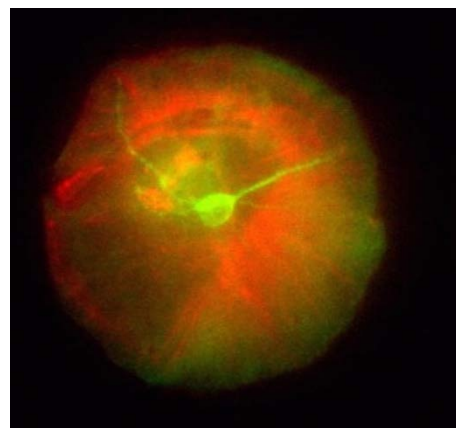
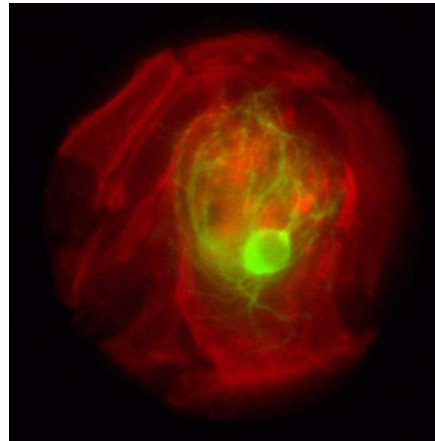
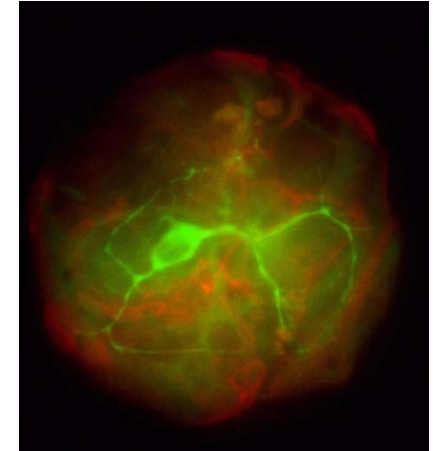
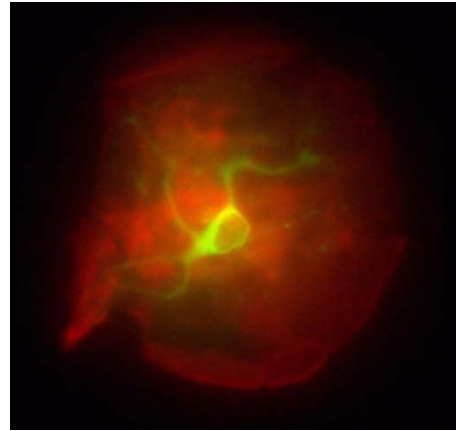
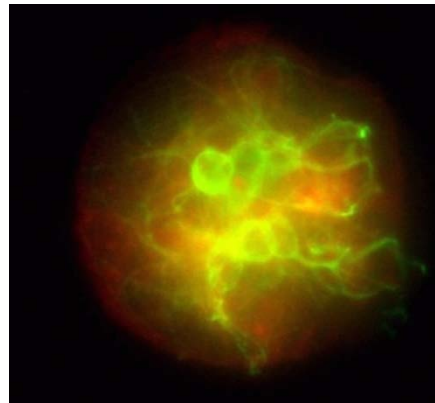
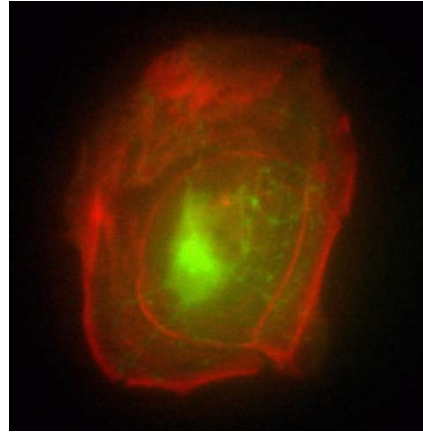
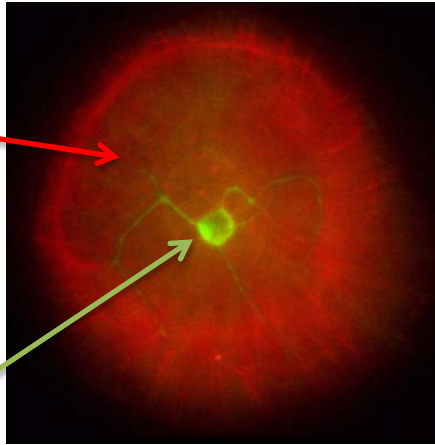
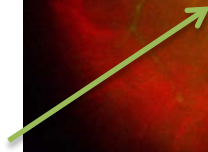
Folch **LAB** University of Washington
Bioengineering

Collages and tiling

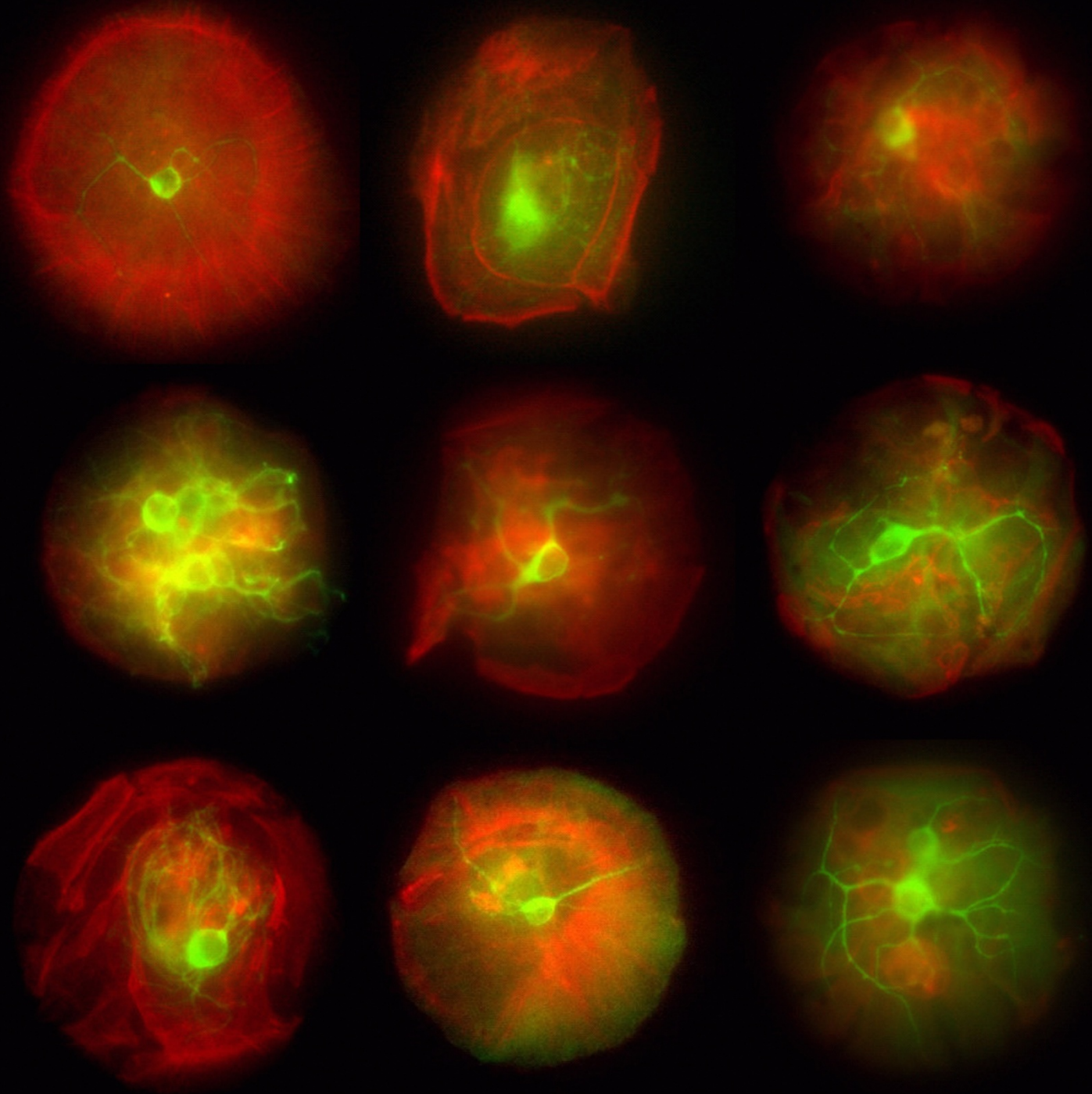
astrocyte



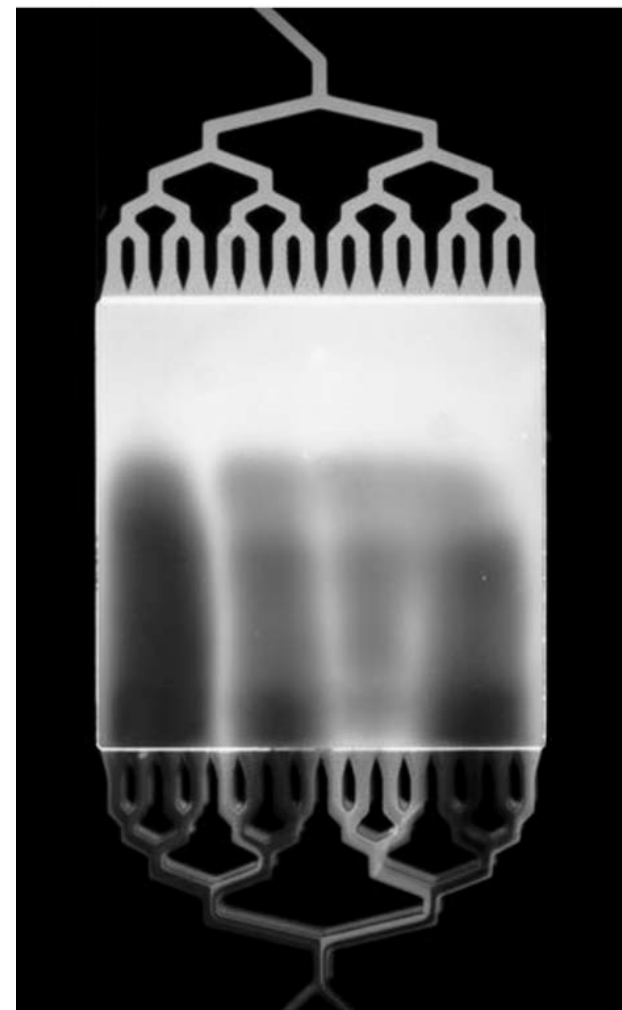
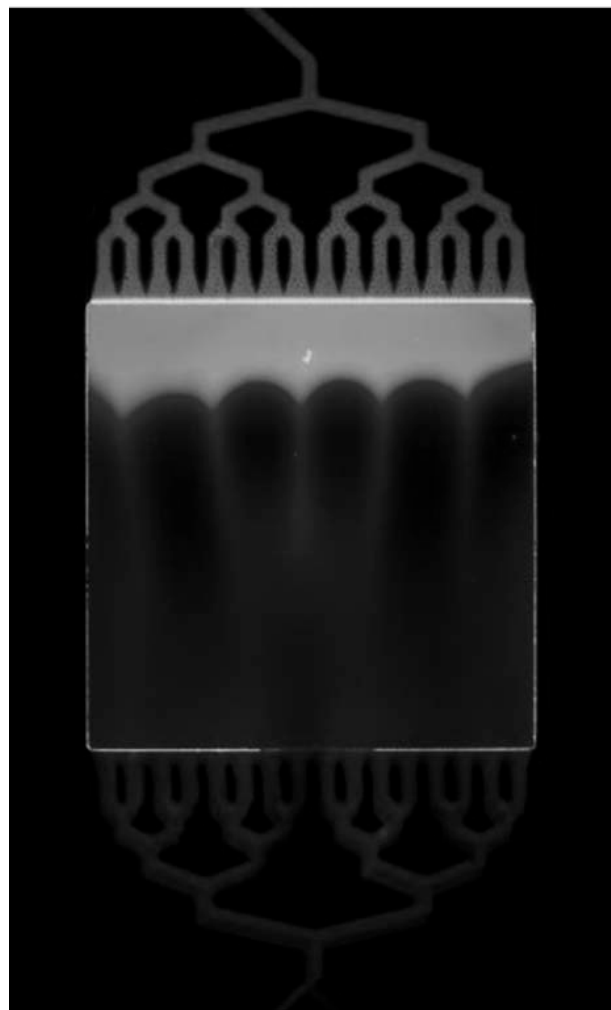
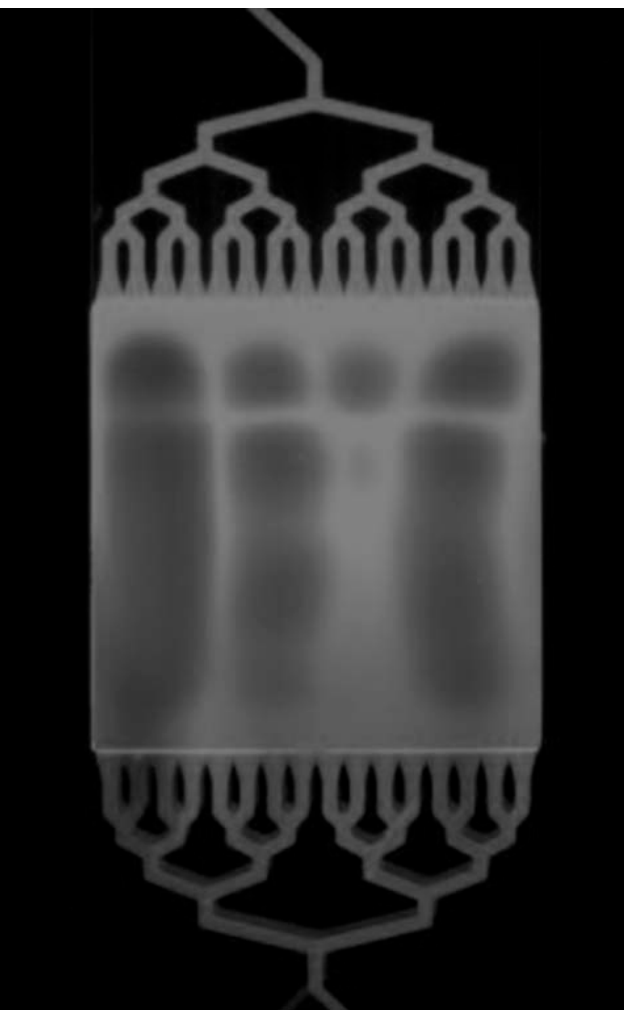
hippocampal
neuron



Neurons
looking at
you

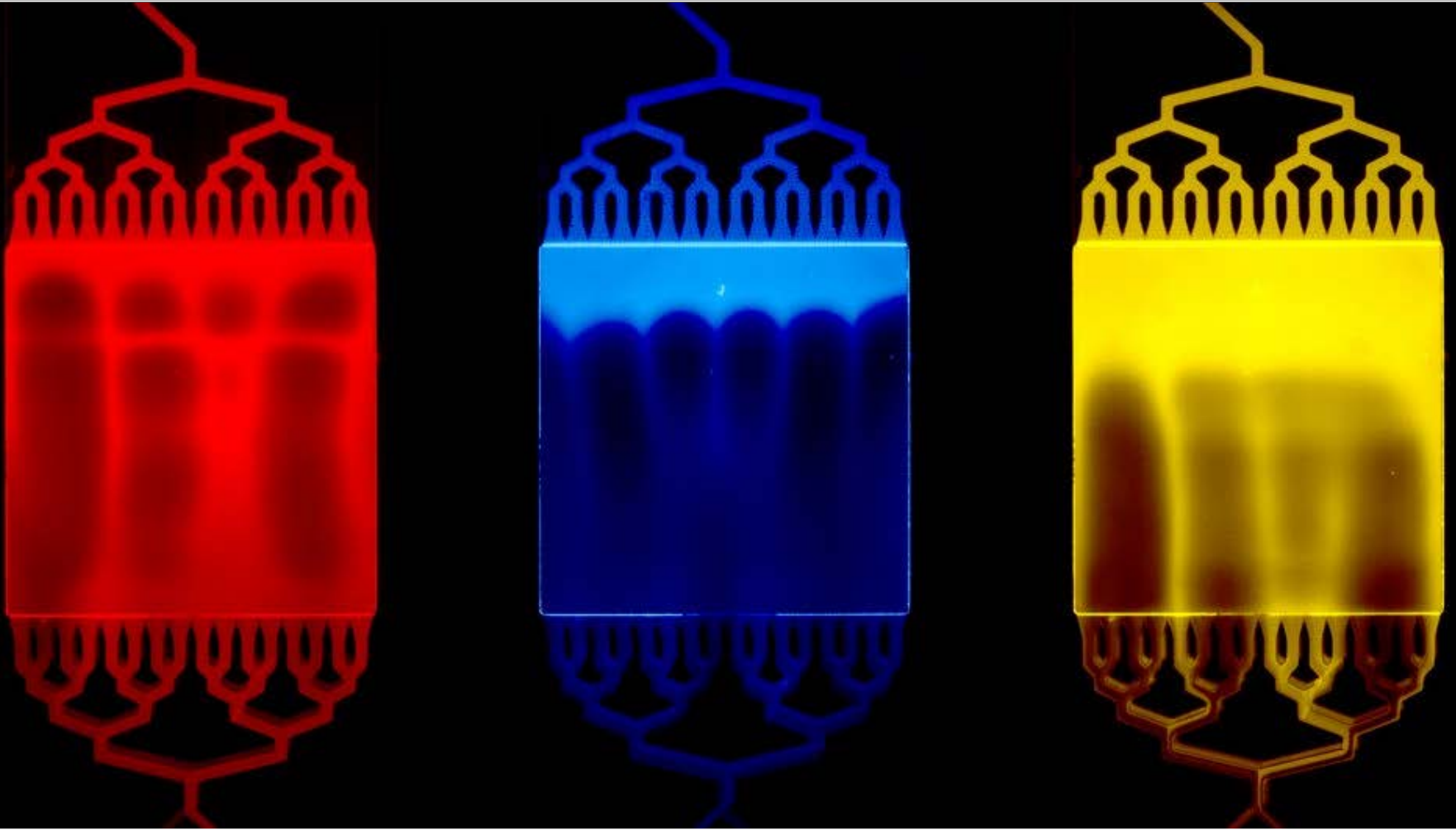


Xavier Figuera
&
Albert Folch



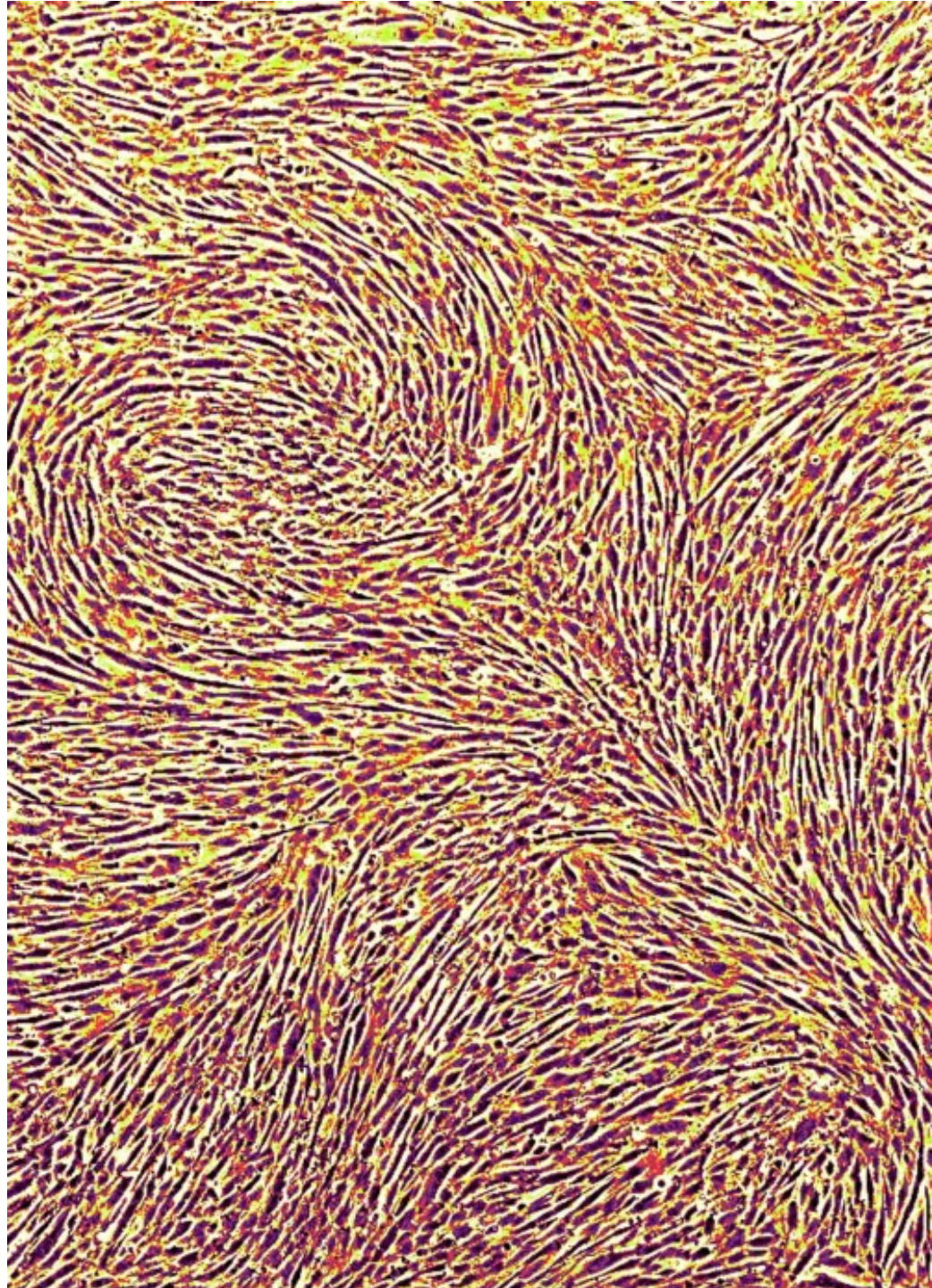
Camera: 12-bit cooled-CCD → no color!

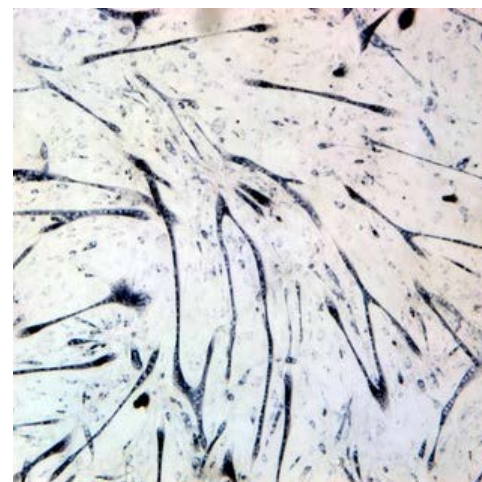
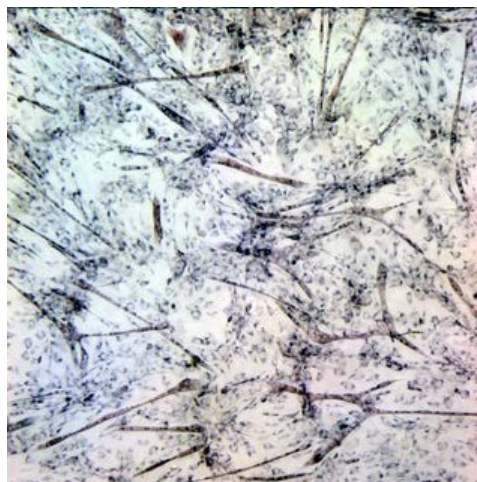
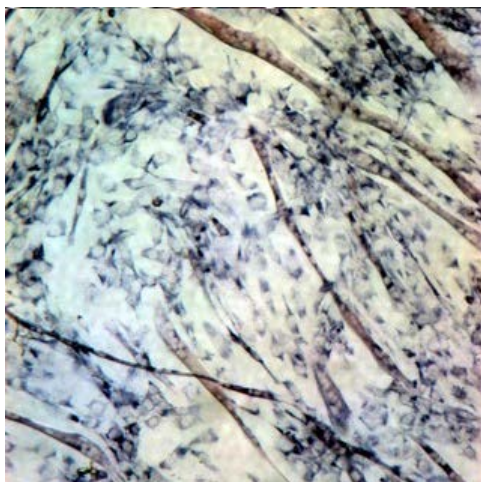
The colors of viscosity



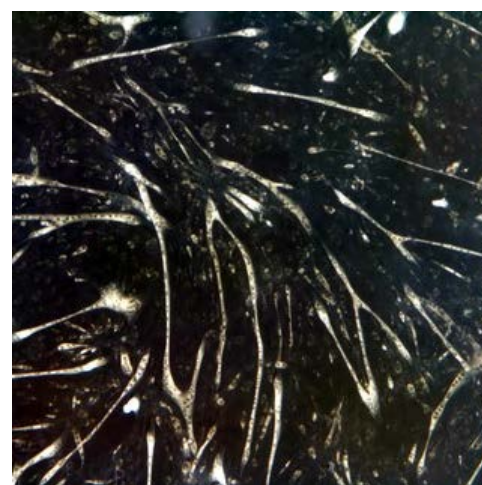
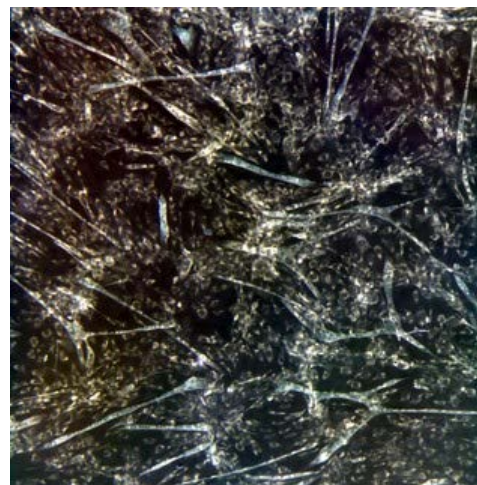
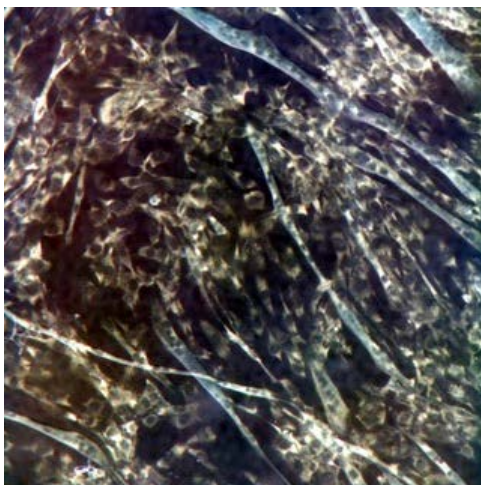
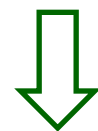
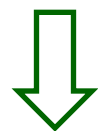
Van Gogh's cells

Aileen Wu & Albert Folch





invert



The cells of Football (homage to Josep Guardiola)



Aileen Wu & Albert Folch

Children celebrating the end of Viscosity

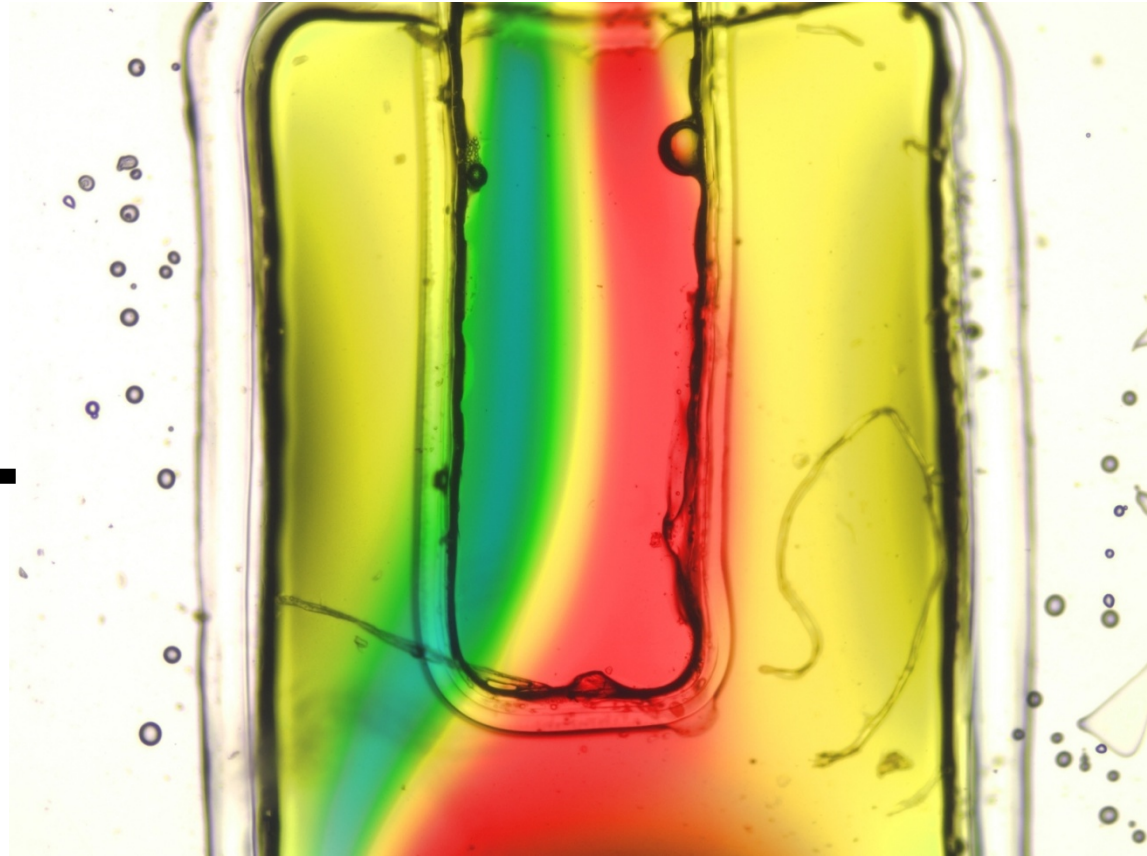


Chris Neils & Albert Folch

Image fusion



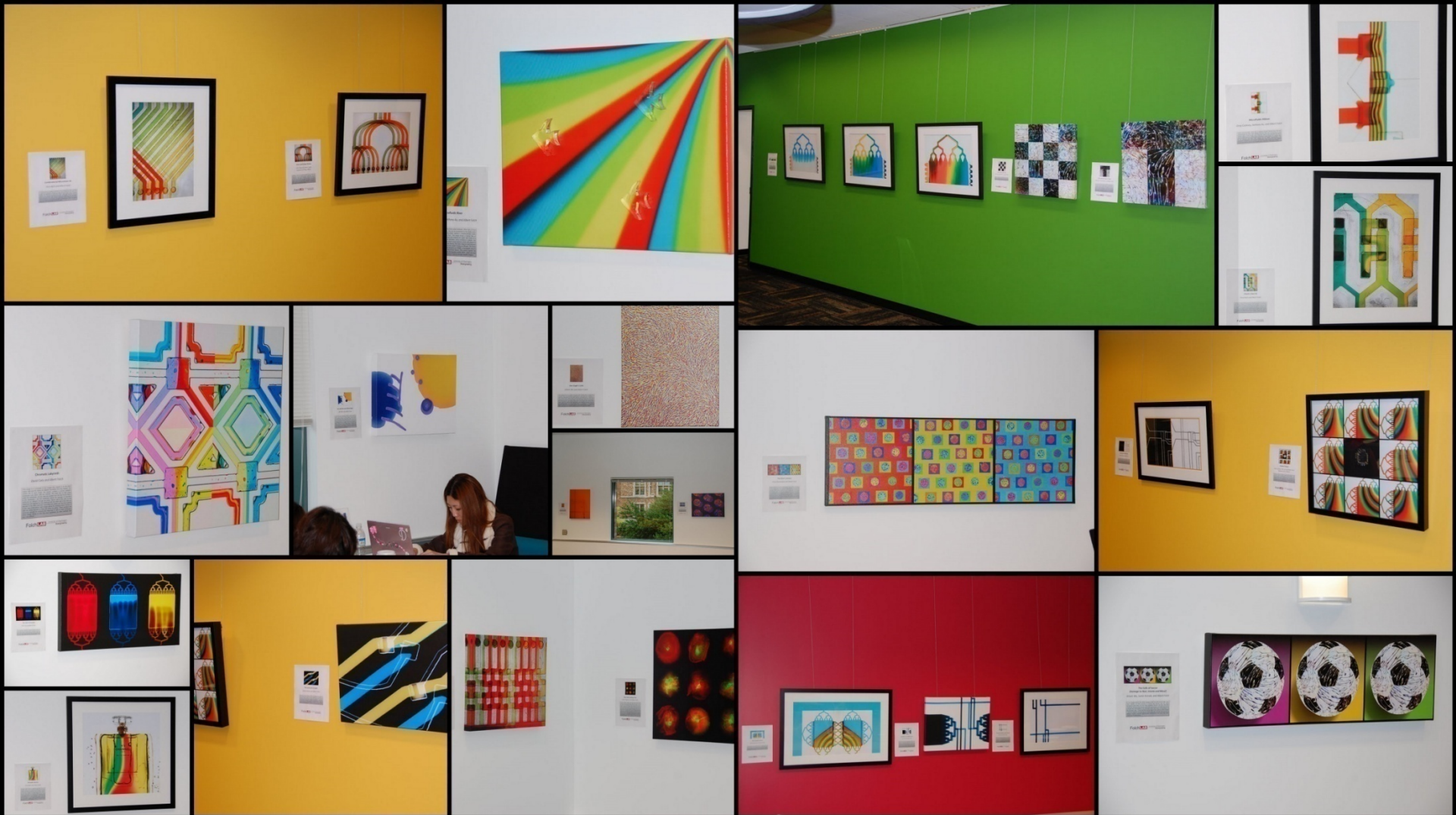
+



Aromatic Channel

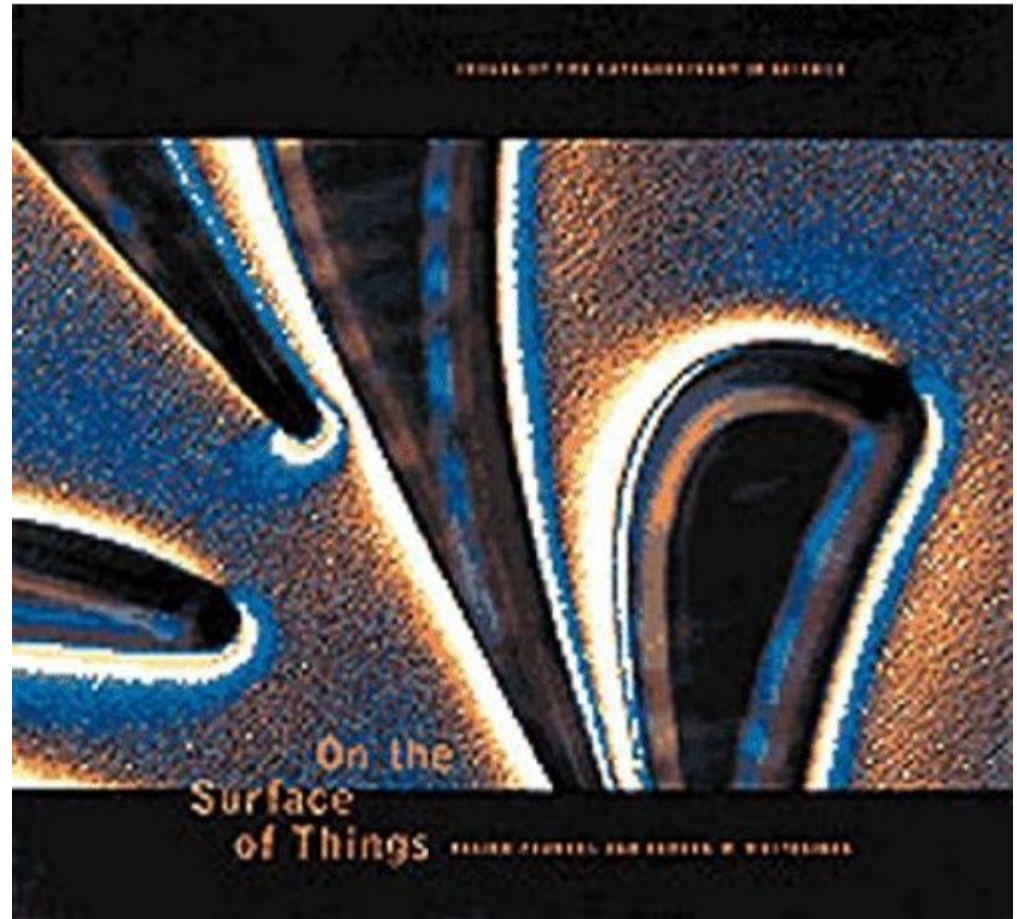
Chris Neils
&
Albert Folch





- 5 BAIT exhibits
- Online gallery marketplace (SeattleOnCanvas.com)
- YouTube channel with ~100,000 visits (!)

#2. Art Is Great For Advertisement



... it takes <1 hr to post your images on Picasa site!

Picasa Web Albums - Albert Folch - Windows Internet Explorer

https://picasaweb.google.com/albertfolch

File Edit View Favorites Tools Help

Google Search Share Sidewiki Bookmarks Check >> albert...

Favorites MyUW Welcome Stay Secure Online Web Slice Gallery WildTangent Games

Picasa Web Albums - Albert Folch

Gmail Calendar Documents Photos Reader Web more

albertfolch@gmail.com

Picasa Web Albums Home My Photos Explore Upload

Albert Folch's Public Gallery Albums (13)

Sort displayed albums by: Upload date

Share

BAIT Exhibit UW Research Commons
Nov 10, 2010
photos: 25

BAIT Exhibit Meany
Sep 9, 2009
photos: 13

BAIT exhibit Harborview
Mar 30, 2009
photos: 20

Beauty is in the Cell of the Beholder
May 14, 2007
photos: 228

Liquid Smallness
May 13, 2007
photos: 464

3D Fluids
May 11, 2007
photos: 212

It's a Small World
May 10, 2007
photos: 348

Cells in motion (movies)
Apr 19, 2007
photos: 15

Evolving fluids (movies)
Apr 18, 2007
photos: 27

Be negative
Apr 17, 2007
photos: 299

The Art in Science
Apr 15, 2007
photos: 294

Good Old Days
Mar 1, 2007
photos: 59

Recent Comments View All

- "it's terrific!" Liang Zhao
- "Microfluidic imagery" Albert Folch
- "Microfluidics image" Albert Folch

Browse Tags

- microfluidics (3)
- picnik (2)
- cells (1)
- image (1)
- imagery (1)
- Microfluidic (1)
- portfolio (1)

RSS

Internet | Protected Mode: On 80%

Greg Cooksey
&
Albert Folch

Lorentz
center

Micro- and nanofluidics for cell biology

Workshop January 18 - 22, 2010, Leiden, The Netherlands

Scientific Organizers

- S. Le Gac, Enschede
- J.C.T. Eijkel, Enschede
- A. van den Berg, Enschede
- M.E. Kuil, Leiden
- H.J. Tanke, Leiden

Invited Speakers

- Osman Basaran, Purdue
- Lydène Bocquet, Lyon
- Françoise Brochard, Paris
- Joel deConinck, Mons-Hainaut
- William Ducker, Virginia Tech
- Jens Eggers, Bristol
- John Hinch, Cambridge
- Laurent Limat, Paris

This event is part of a series of workshops organized by the Lorentz Center, which fosters interdisciplinary work, discussions and collaborations. For registration see: www.lorentzcenter.nl

Room: Design Superficial Studies, Den Haag

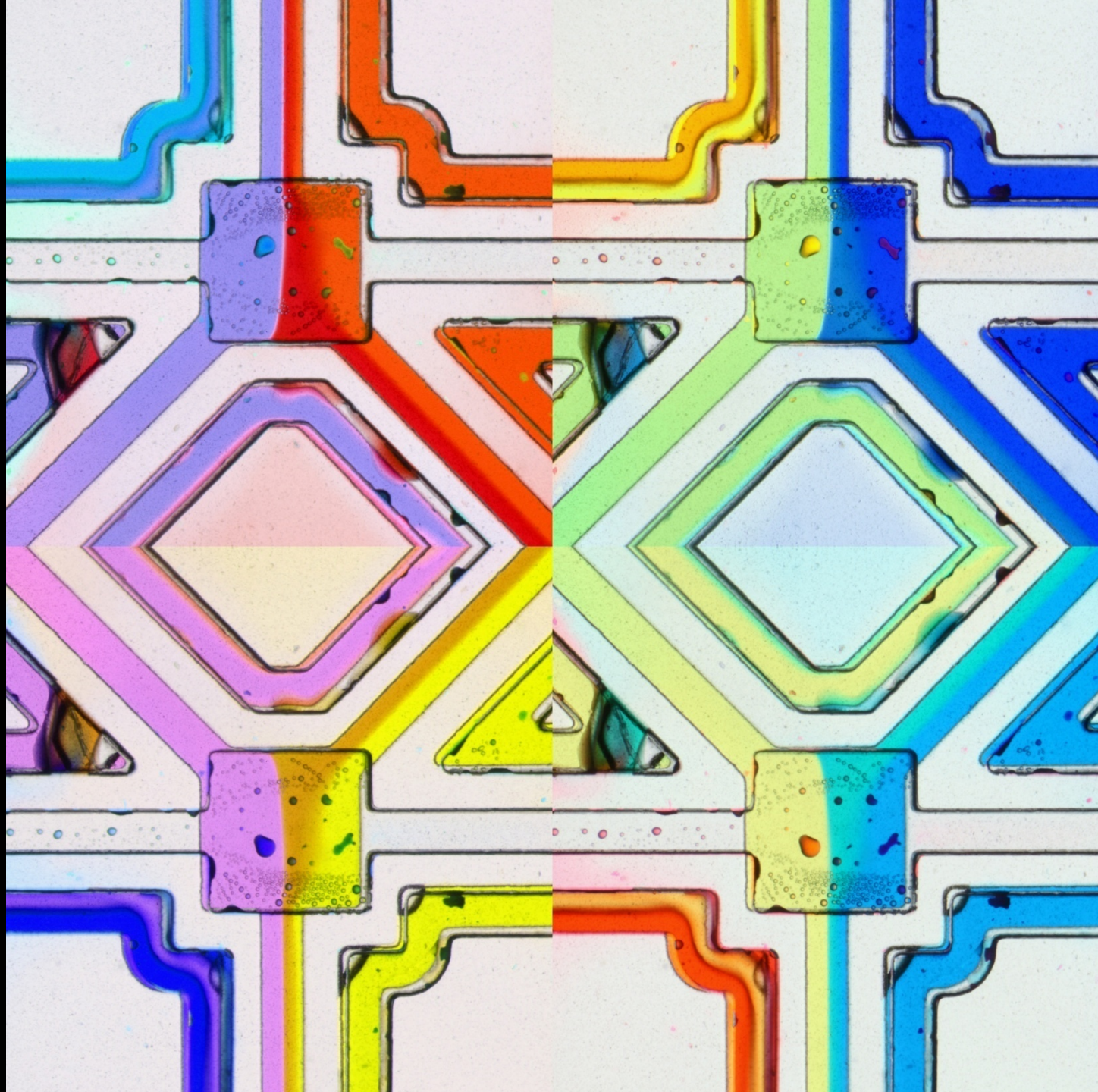


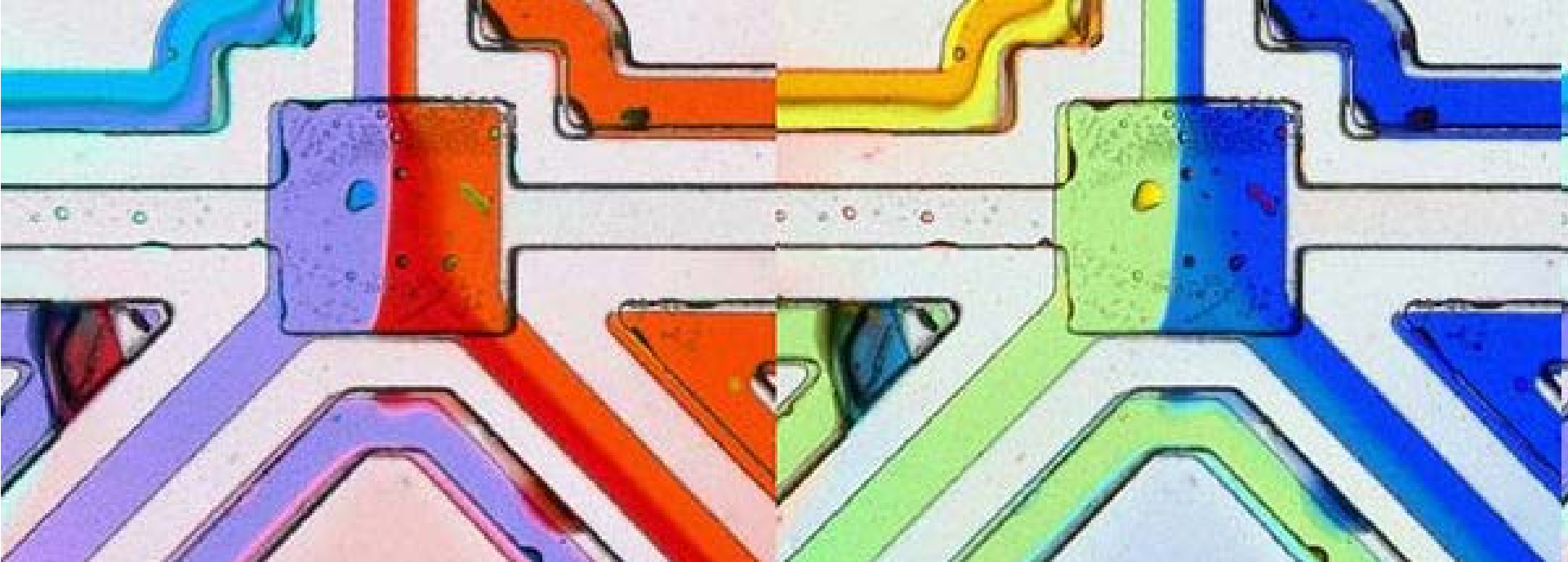
Lorentz
center

www.lorentzcenter.nl

Chromatic labyrinth

David Cate
&
Albert Folch





EMBL Conference

Microfluidics 2012

Session Chairs

Norman Dovichi

Analytical Chemistry (Editor), USA

Jonathan Faiz

Angewandte Chemie (Assoc. Editor), Germany

Harp Minhas

Lab on a Chip (Editor), UK

Organisers

Steve Quake

Stanford University, USA

Christoph Merten

EMBL Heidelberg, Germany

25 – 27 July 2012

EMBL Advanced Training Centre
Heidelberg, Germany

REGISTRATION DEADLINE: 31 MAY 2012

www.embl.de/events

Why *not* Art in Science?

Why did we *stop* doing Art?

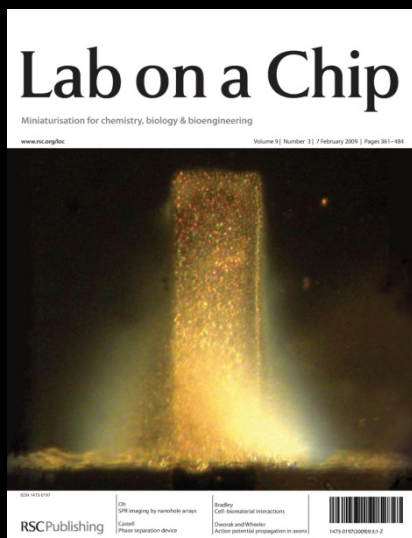
MicroTAS Art in Science Award

Sponsored by NIST and Lab On A Chip

\$2,500 prize

Will be featured on the cover of LOC

Previous Award Winners



2008
Yu-Wen Huang



2009
Jungkwun Kim



2010
Nicholas Gunn

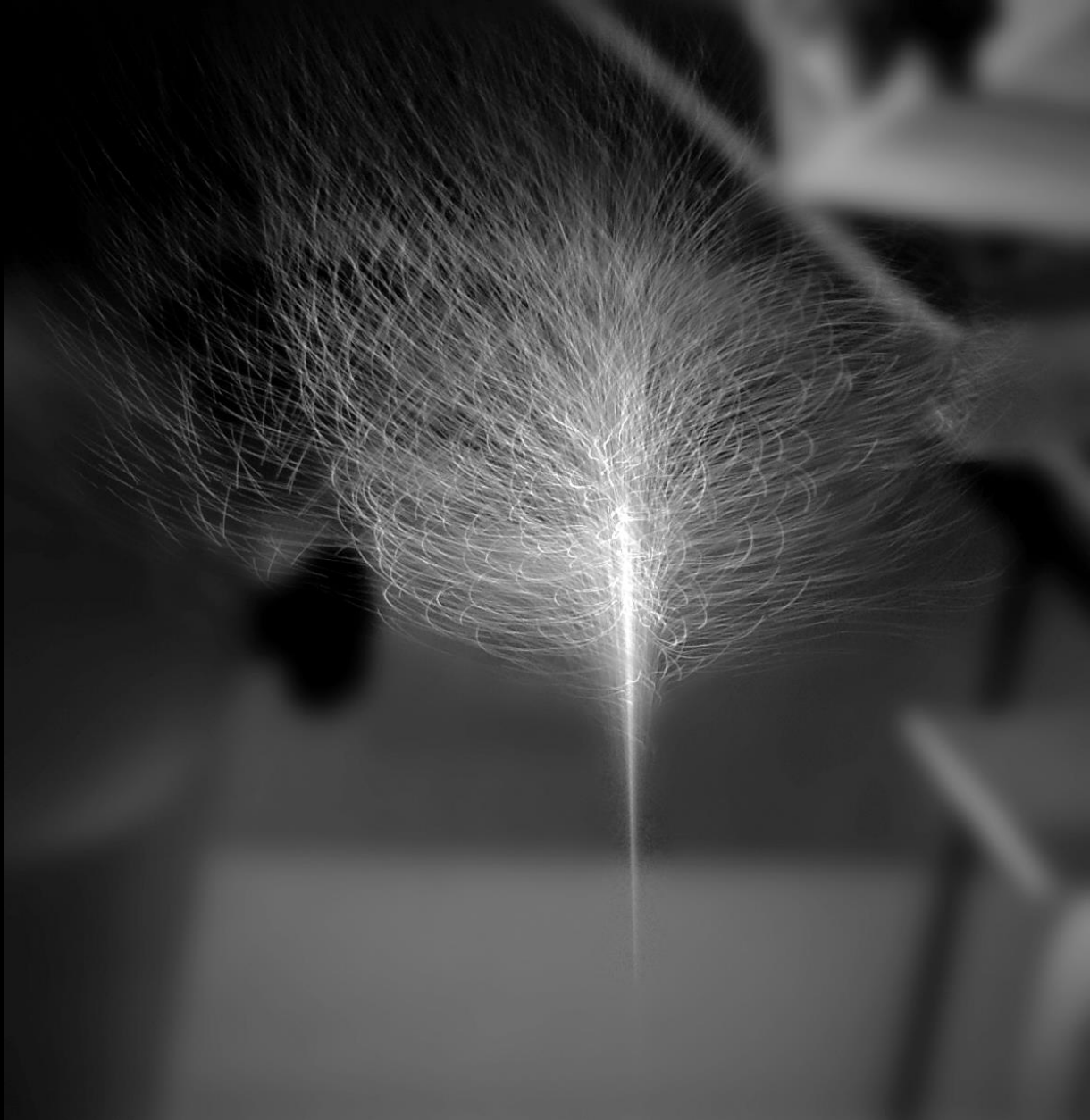


2011
Dong Jin Shin



2012 Yi
Zhang

Top Contenders



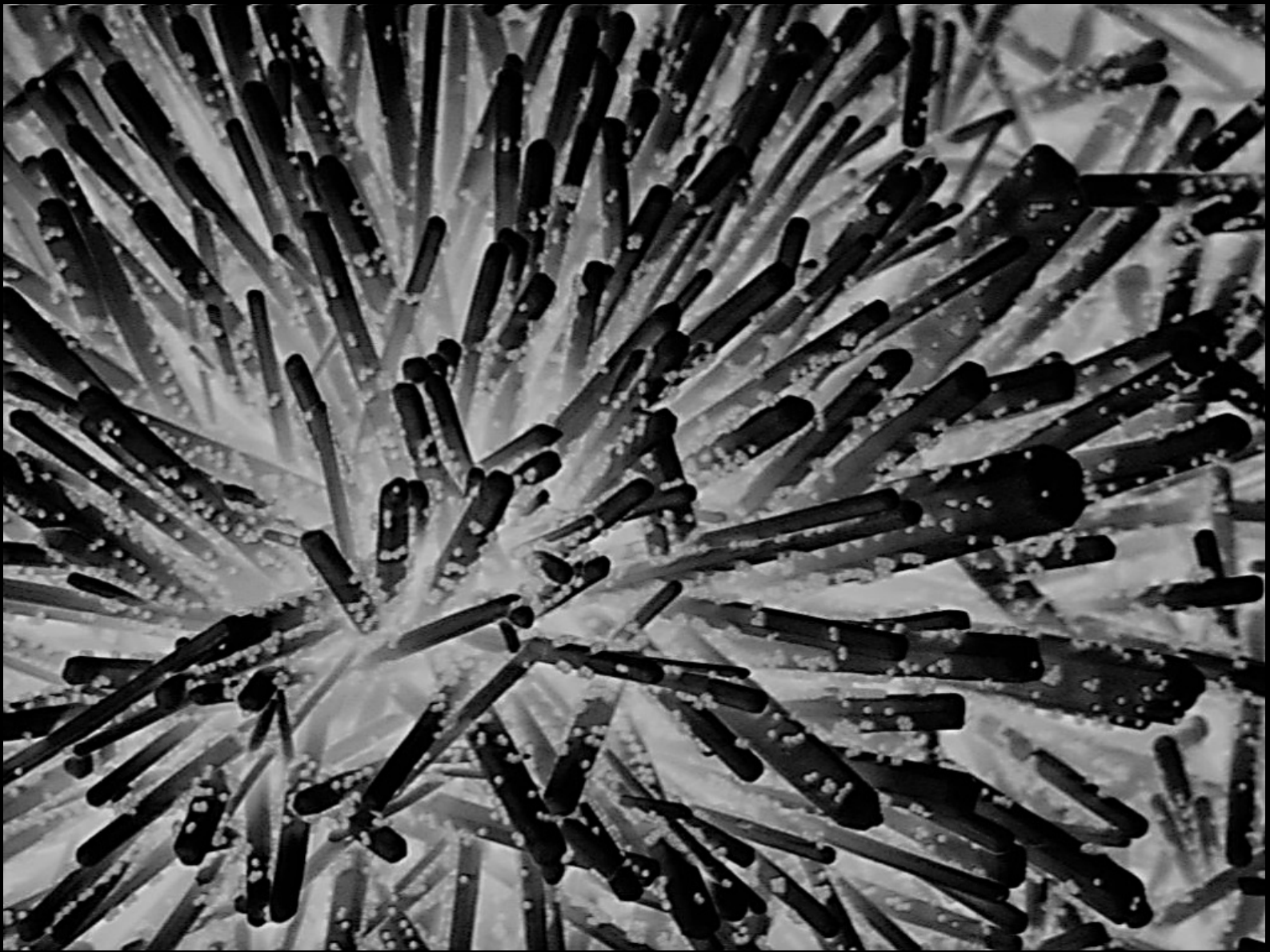
#5 - “Droplets Fireworks”

Jan Eijkel, MESA+ Institution for Nanotechnology

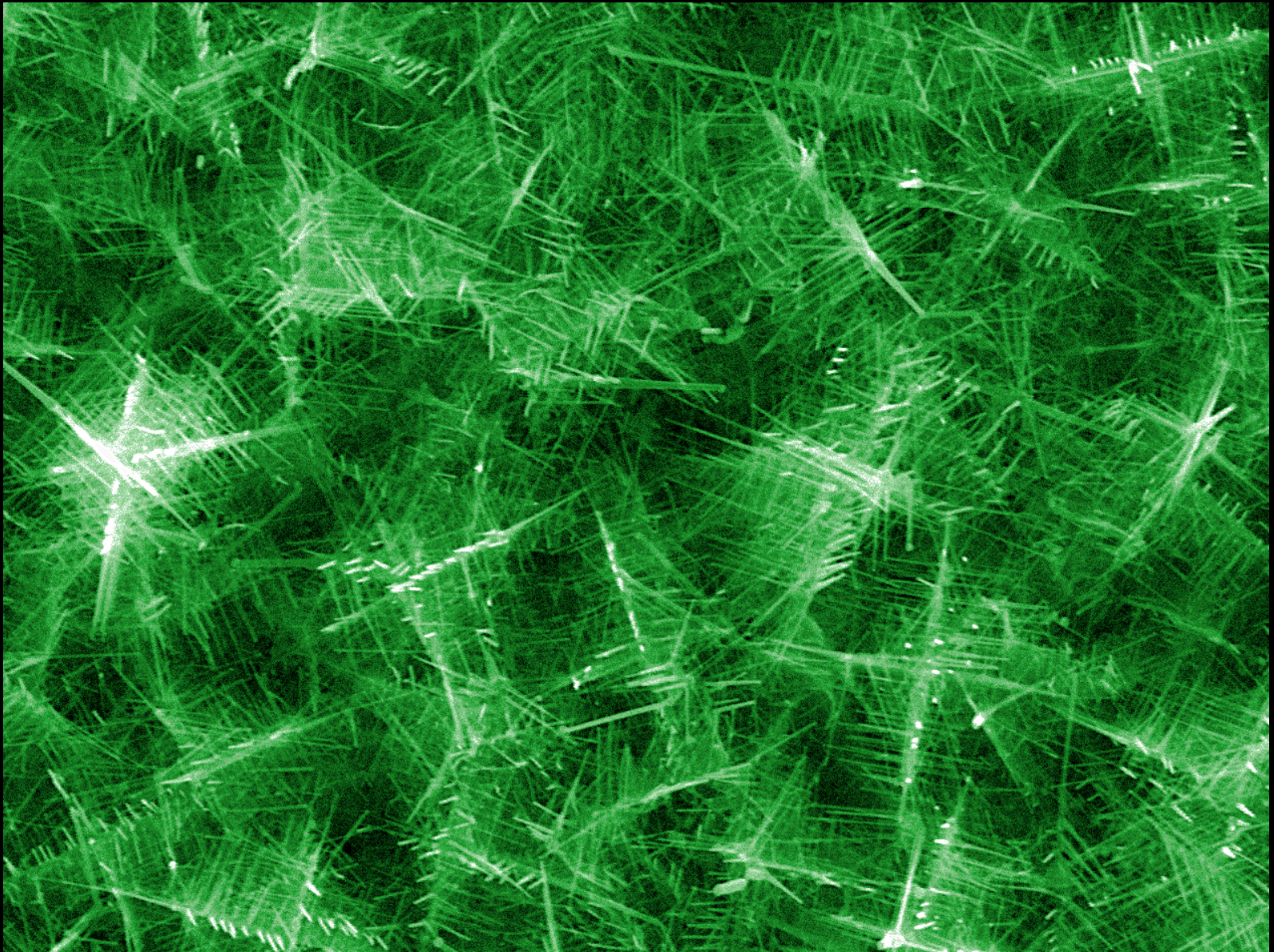


#4 - “Van Gogh’s Wall Paper”

Ye Wang, Eindhoven University of Technology

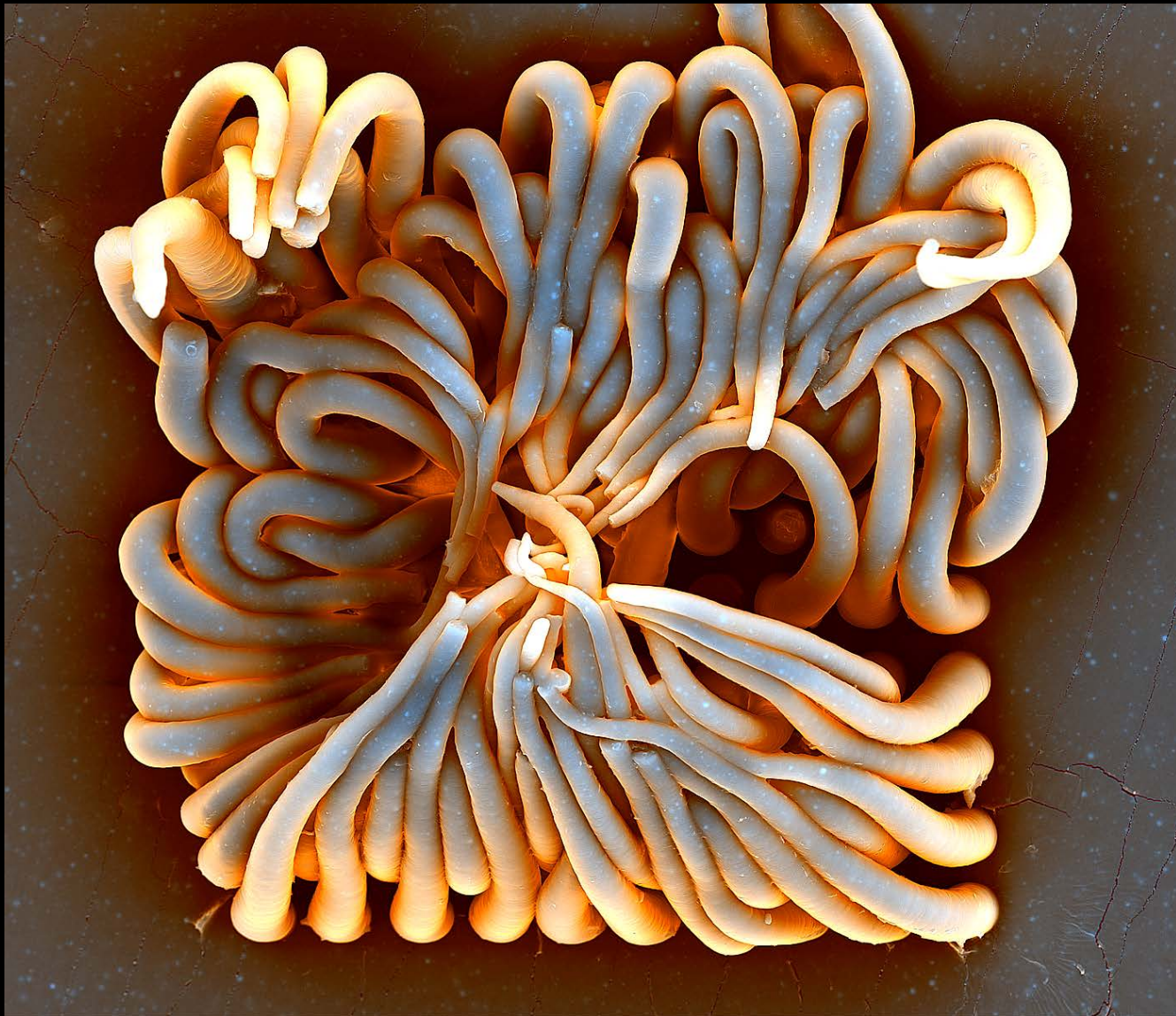


#3 - “Trapping Trapping”
Satoru Ito, Nagoya University



#2 - “Nanoforest”
Sakon Rahong, Osaka University

The Winner



“Artificial Life”

Ye Wang, Eindhoven University of Technology