



STRUCTURAL  
BIOLOGY

**Volume 77 (2021)**

**Supporting information for article:**

**A simple vapor-diffusion method enables protein crystallization inside the HARE serial crystallography chip**

**Brenna Norton-Baker, Pedram Mehrabi, Juliane Boger, Robert Schönherr, David von Stetten, Hendrik Schikora, Ashley O. Kwok, Rachel W. Martin, R. J. Dwayne Miller, Lars Redecke and Eike C. Schulz**

# A simple vapor diffusion method enables protein crystallization inside the HARE serial crystallography chip

Brenna Norton-Baker<sup>1,2</sup>, Pedram Mehrabi<sup>1,3</sup>, Juliane Boger<sup>4</sup>, Robert Schönherr<sup>4,5</sup>, David von Stetten<sup>6</sup>, Hendrik Schikora<sup>7</sup>, Ashley O. Kwok<sup>2</sup>, Rachel W. Martin<sup>2,8</sup>, R.J. Dwayne Miller<sup>9,10</sup>, Lars Redecke<sup>4,5</sup> and Eike C. Schulz<sup>1,3\*</sup>

<sup>1</sup>Department for Atomically Resolved Dynamics, Max-Planck-Institute for Structure and Dynamics of Matter, Luruper Chaussee 149, 22761 Hamburg, Germany

<sup>2</sup>Department of Chemistry, University of California, Irvine 92697-2025, United States

<sup>3</sup>Hamburg Centre for Ultrafast Imaging, Universität Hamburg, HARBOR, Luruper Chaussee 149, 22761 Hamburg, Germany

<sup>4</sup>Institute of Biochemistry, Center for Structural and Cell Biology in Medicine, University of Lübeck, Ratzeburger Allee 160, D-23562 Lübeck, Germany

<sup>5</sup>Deutsches Elektronen-Synchrotron (DESY), Photon Science, Notkestrasse 85, D-22607 Hamburg, Germany

<sup>6</sup>European Molecular Biology Laboratory, Hamburg Unit c/o Deutsches Elektronen-Synchrotron, 22607 Hamburg, Germany

<sup>7</sup>Scientific Support Unit Machine Physics, Max-Planck-Institute for Structure and Dynamics of Matter, Luruper Chaussee 149, 22761 Hamburg, Germany

<sup>8</sup>Department of Molecular Biology and Biochemistry, University of California, Irvine 92697-3900, United States

<sup>9</sup>Department of Physics, Universität Hamburg, Jungiusstrasse 9, 20355 Hamburg, Germany

<sup>10</sup>Departments of Chemistry and Physics, University of Toronto, 80 St. George Street, Toronto, Ontario, M5S 3H6, Canada

\*to whom correspondence should be addressed:

[eike.schulz@mpsd.mpg.de](mailto:eike.schulz@mpsd.mpg.de)

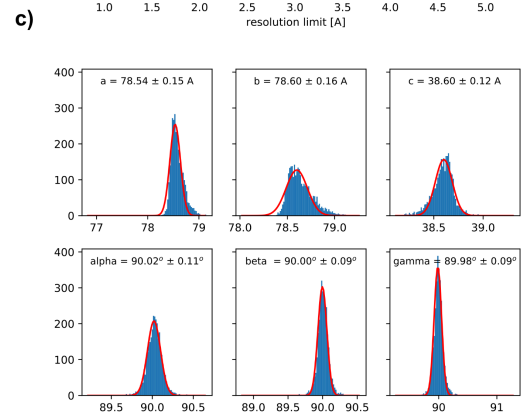
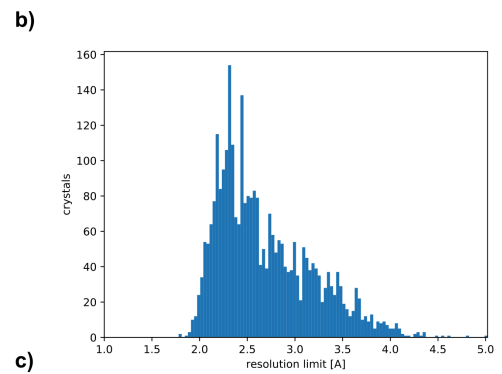
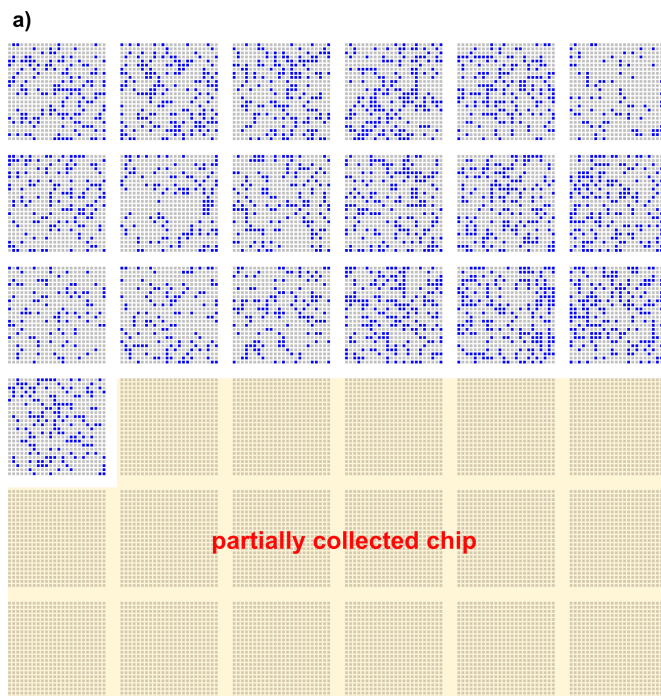
## Supplementary Material

### Supplementary Figures

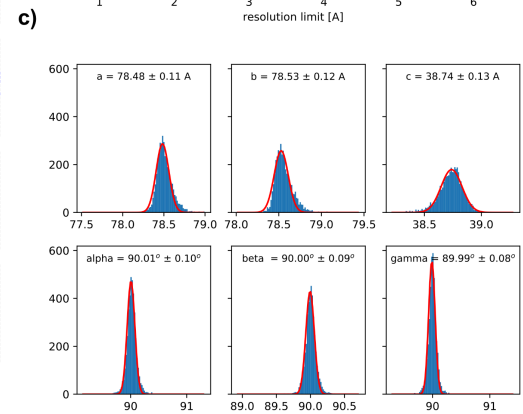
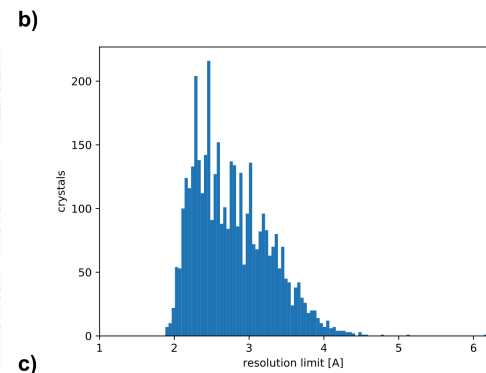
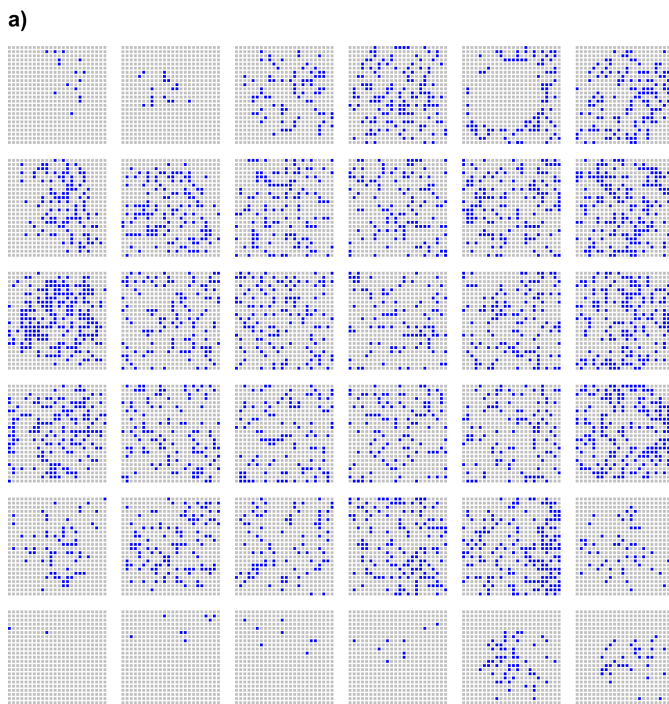
- a) Hit-map: a blue dot on the grey outline of the chip compartments indicates a feature for which one or more protein diffraction pattern(s) could be obtained. For partially collected chips, the missing parts are indicated in yellow.
- b) Resolution histogram of the diffraction patterns obtained for each chip.
- c) Unit cell parameter histogram of the diffraction patterns obtained for each chip.

# Lysozyme

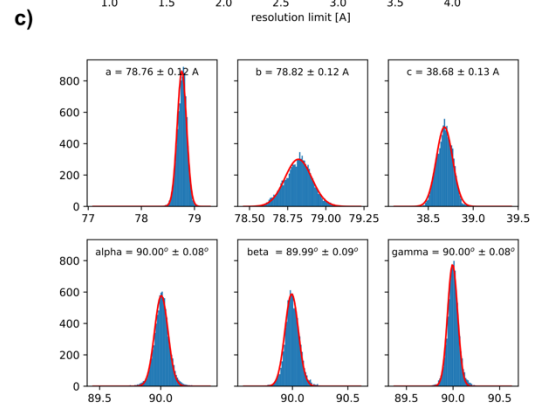
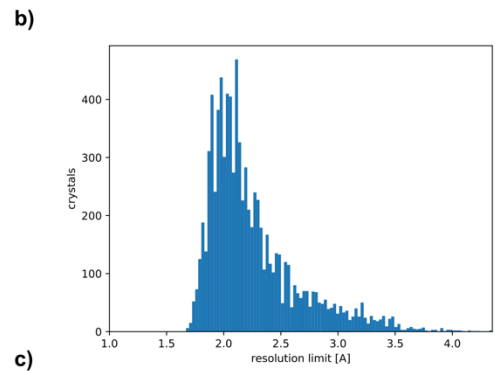
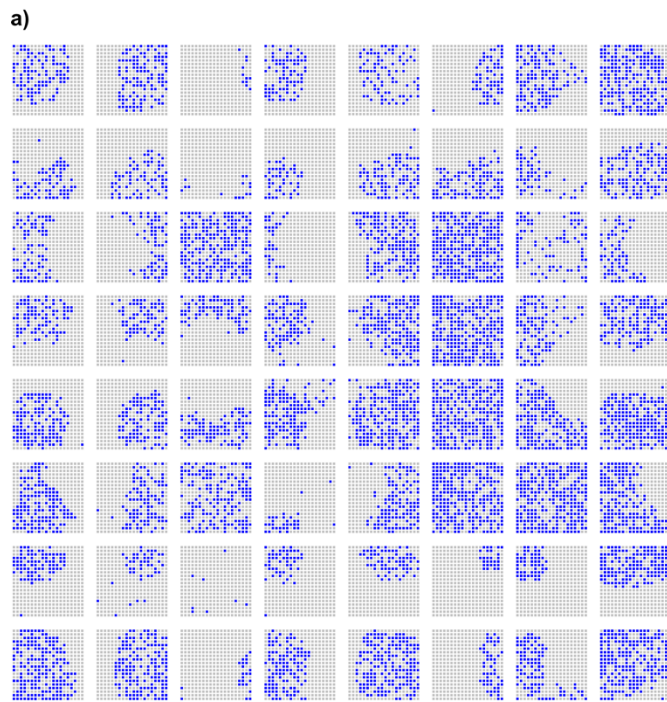
## Chip1



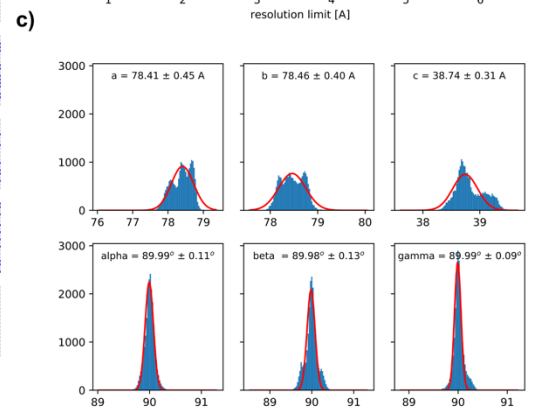
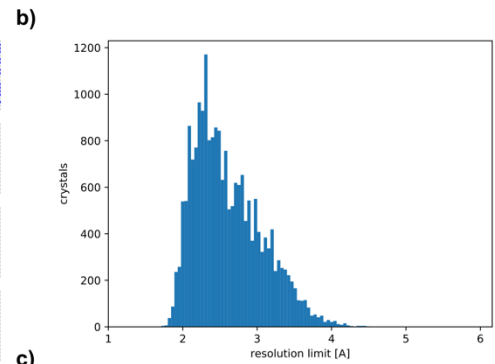
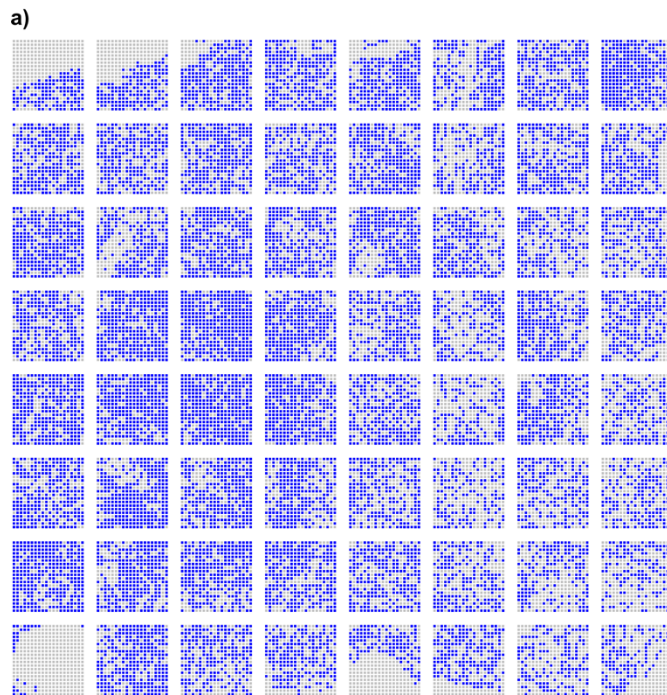
## Chip2



# Chip3



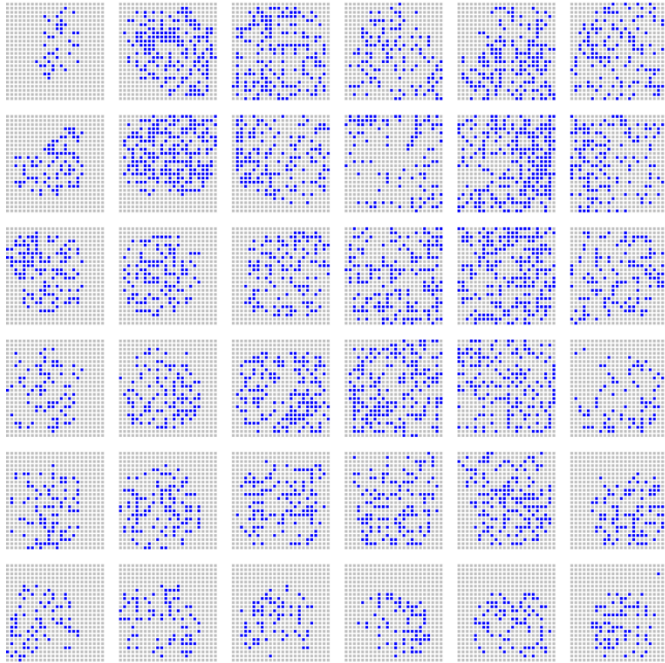
# Chip4



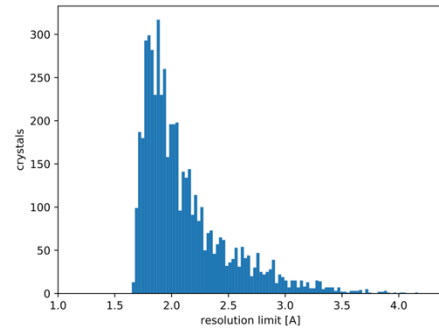
# Proteinase K

## Chip1

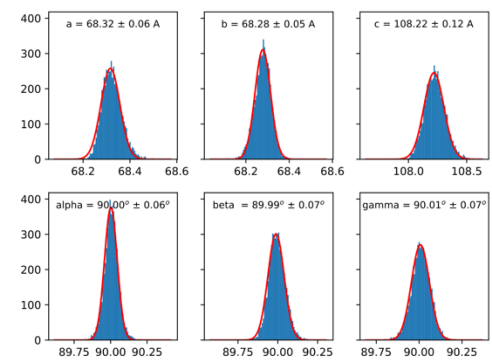
a)



b)

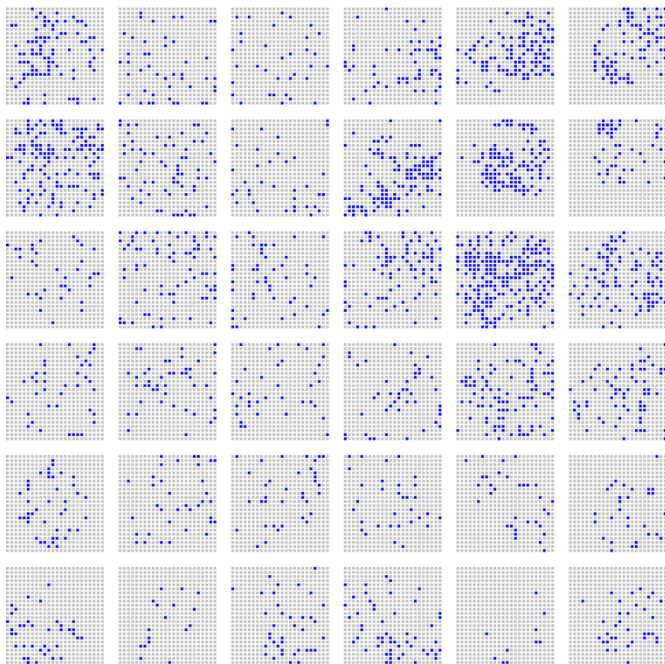


c)

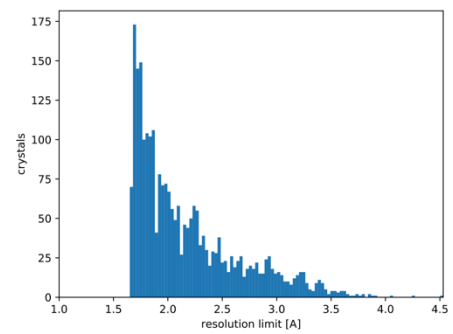


## Chip2

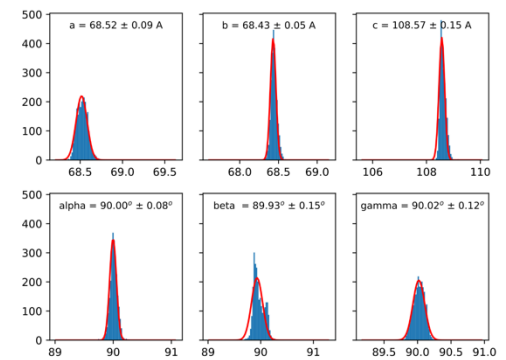
a)



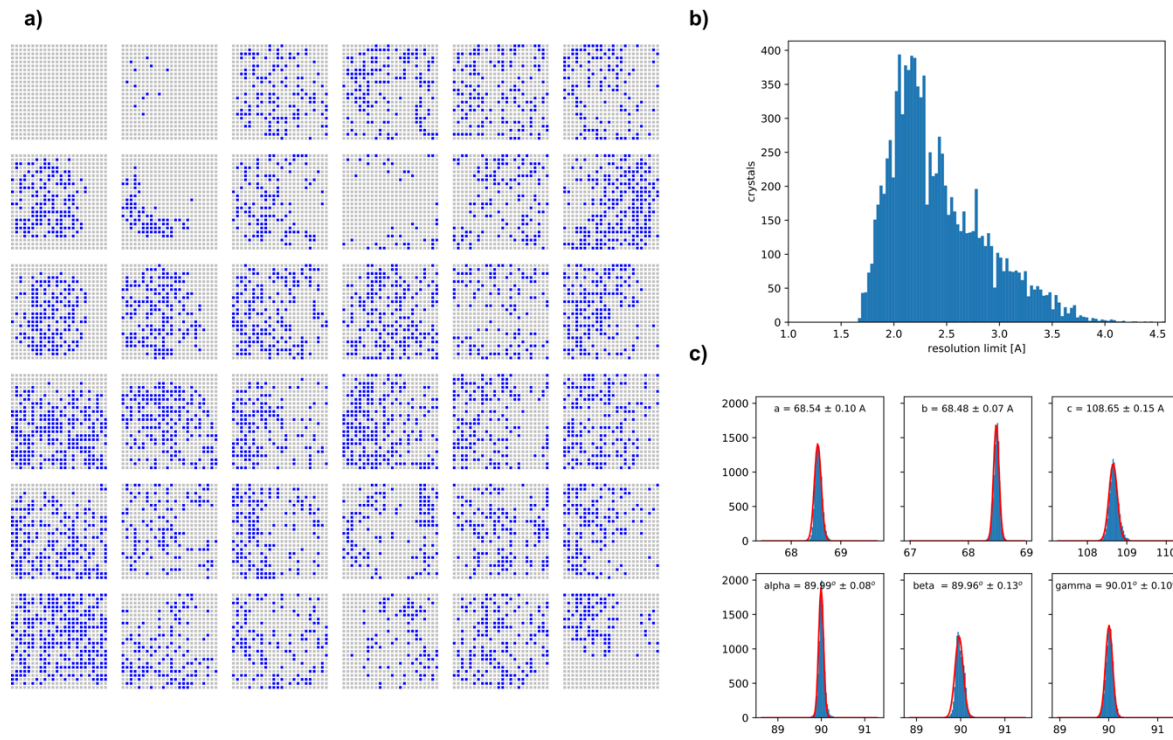
b)



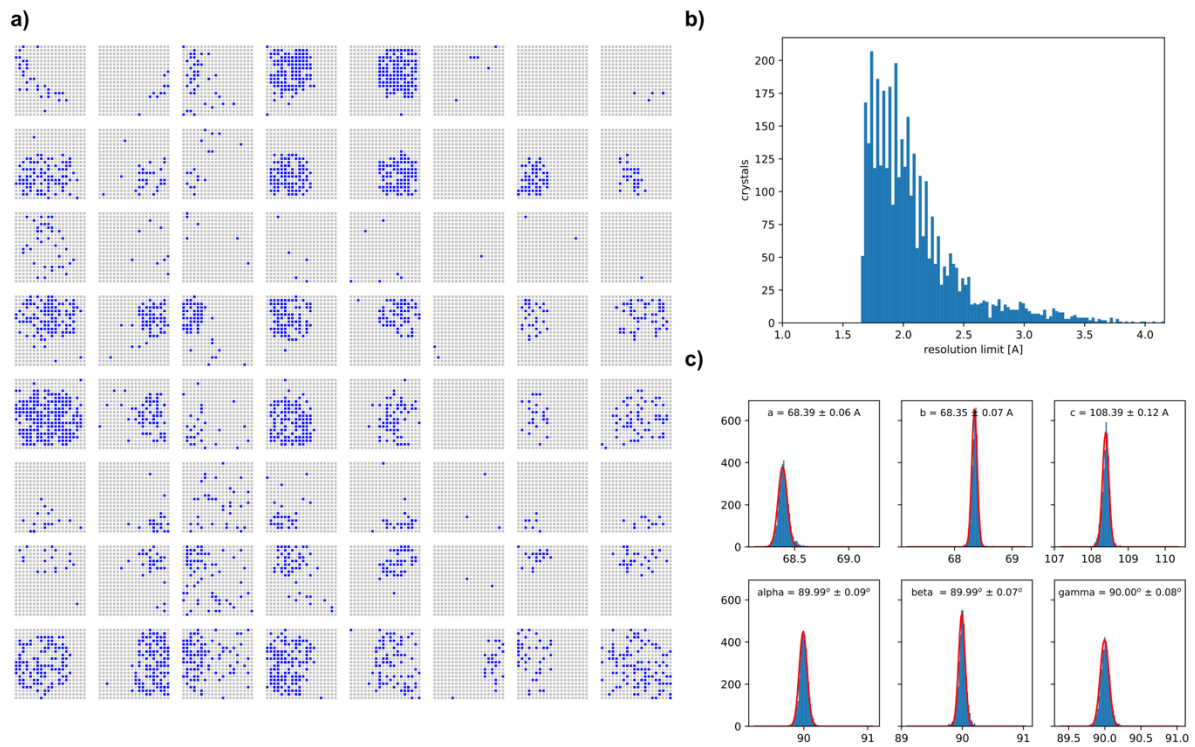
c)



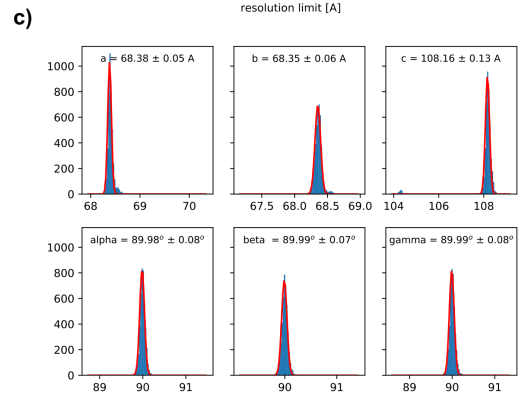
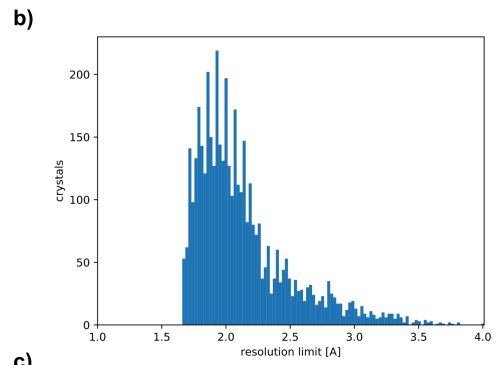
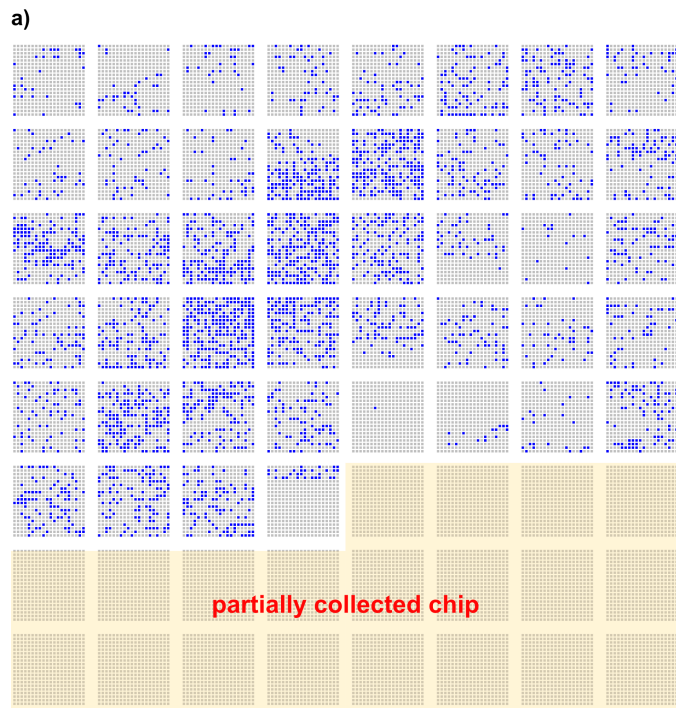
## Chip3



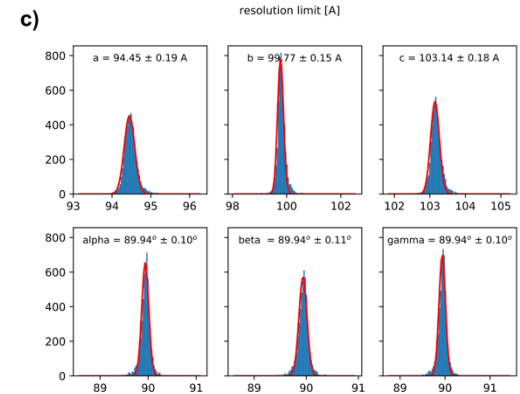
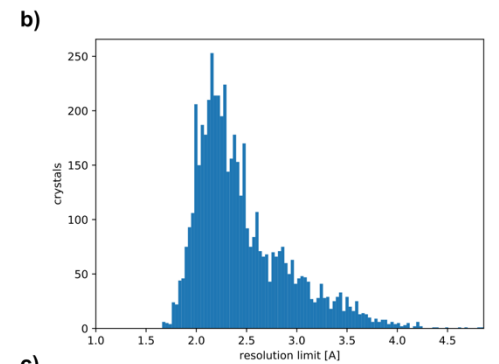
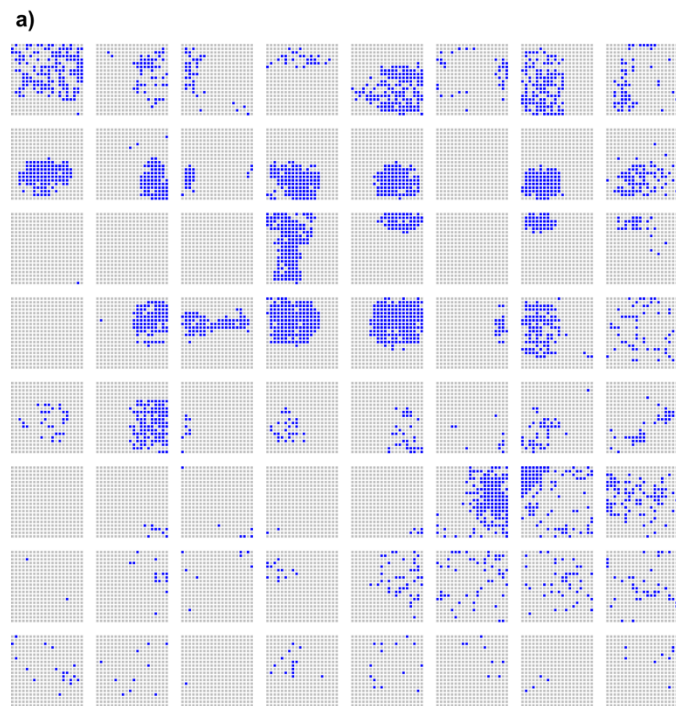
## Chip4



# Chip5

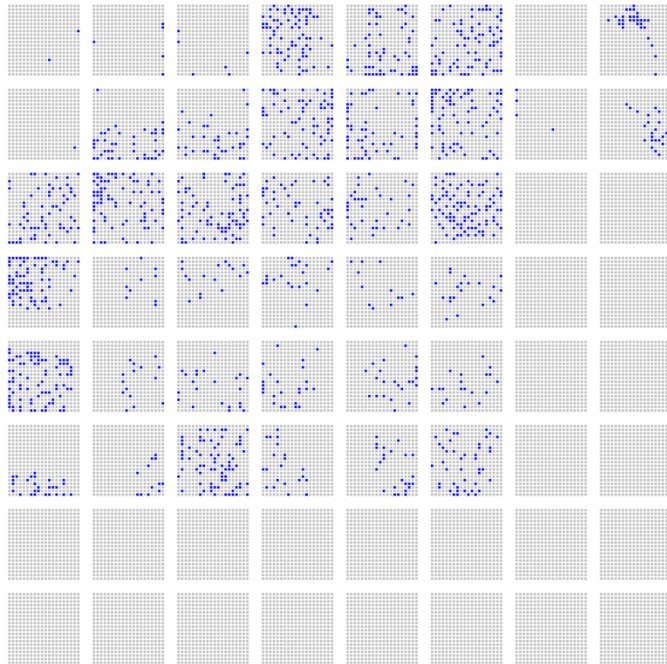


# Xylose isomerase

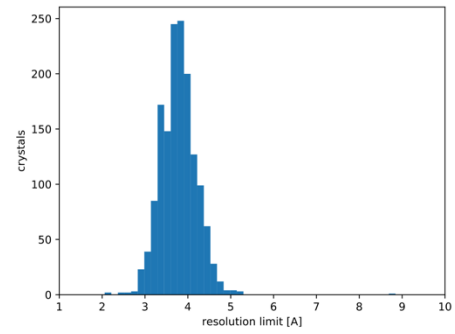


# $\gamma$ S-crystallin mutant

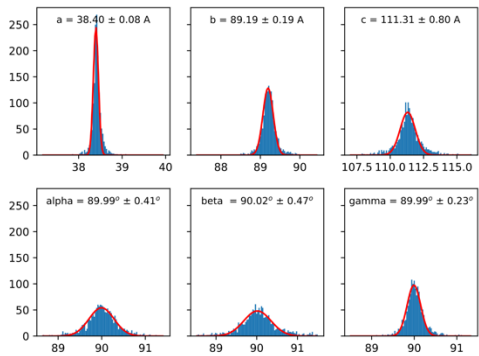
a)



b)



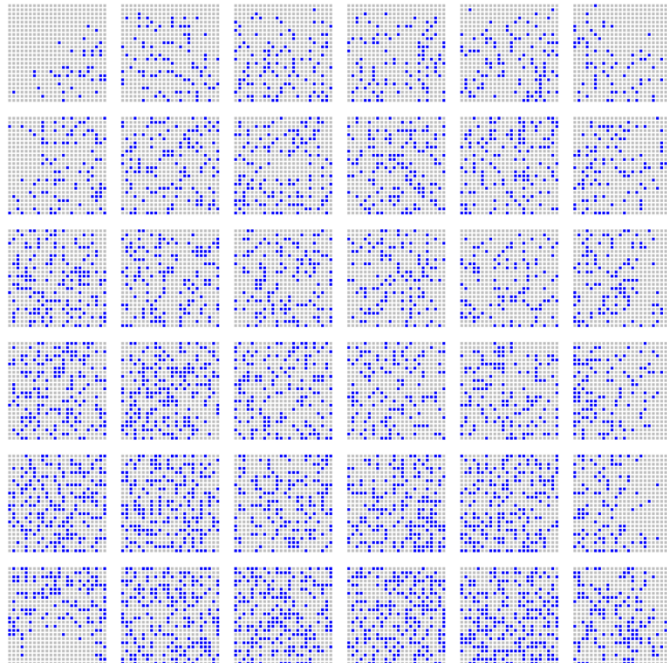
c)



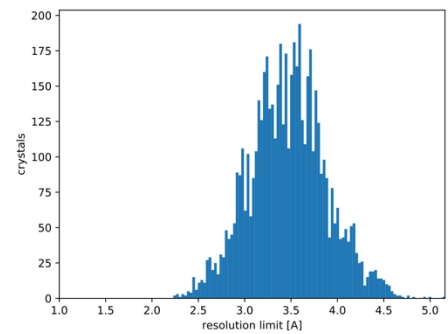
# Hex-1

## Chip1 (loaded)

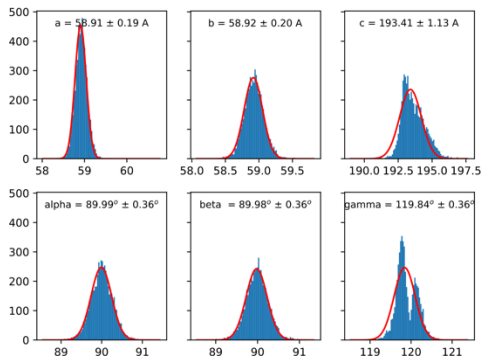
a)



b)



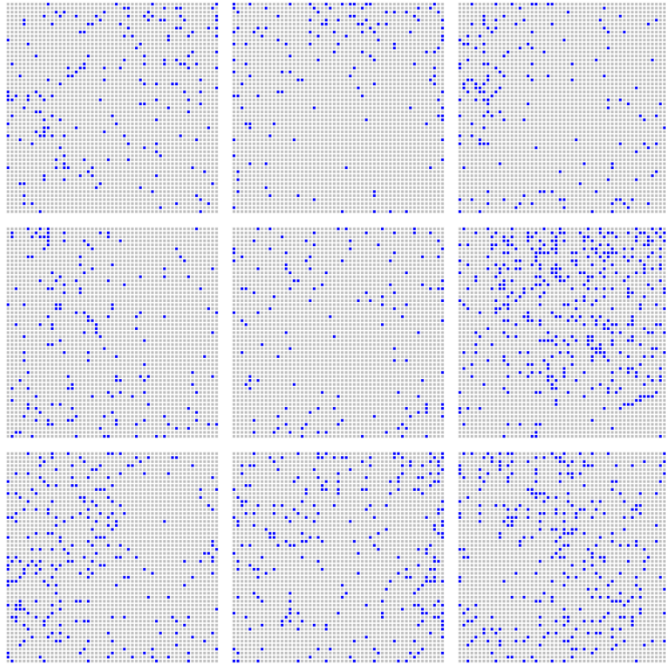
c)



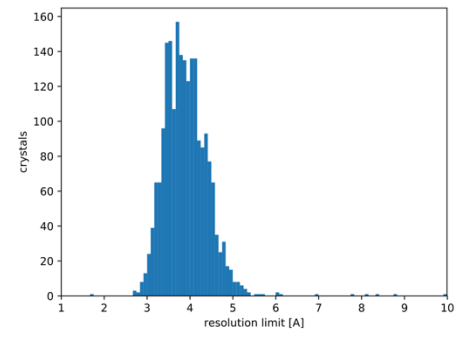


## Chip2 (in-situ)

a)



b)



c)

