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(Enhanced Oil Recovery: EOR)















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5) CO<sub>2</sub> CO<sub>2</sub>

6) NH<sub>2</sub> CO<sub>2</sub>

7)

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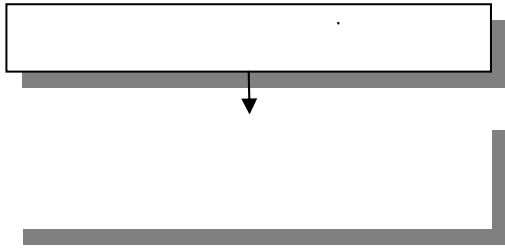
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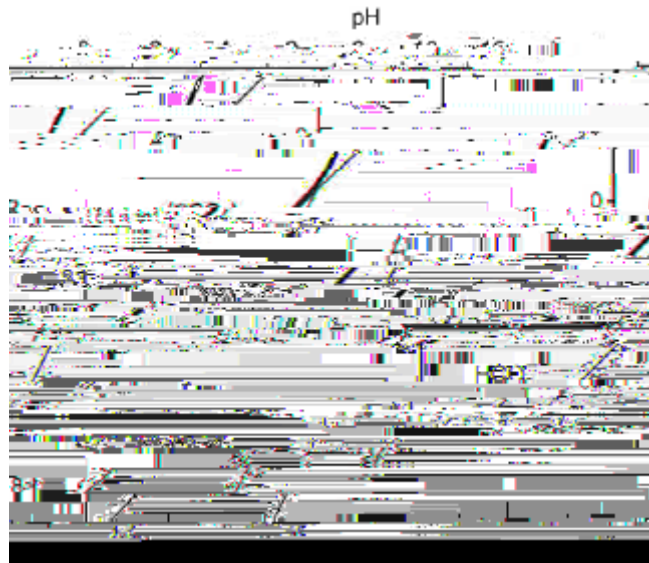
PA









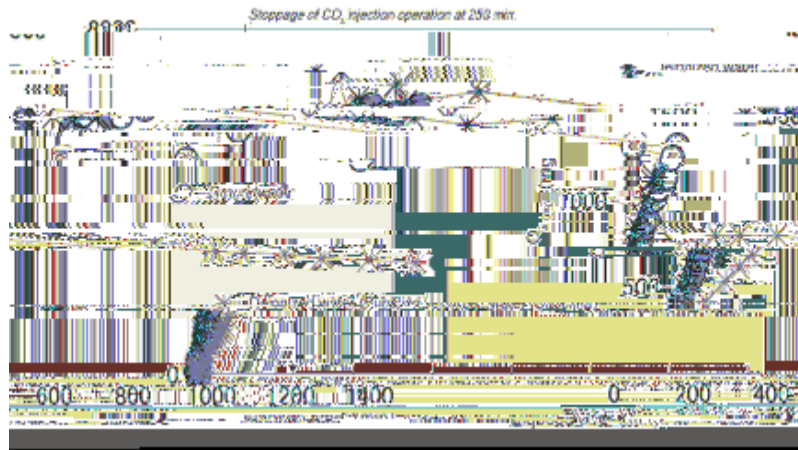


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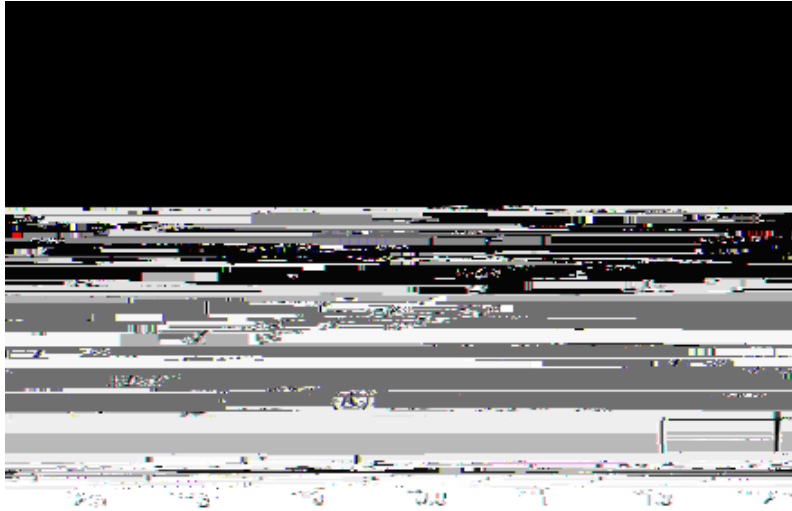
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$\text{HCO}_3^-$

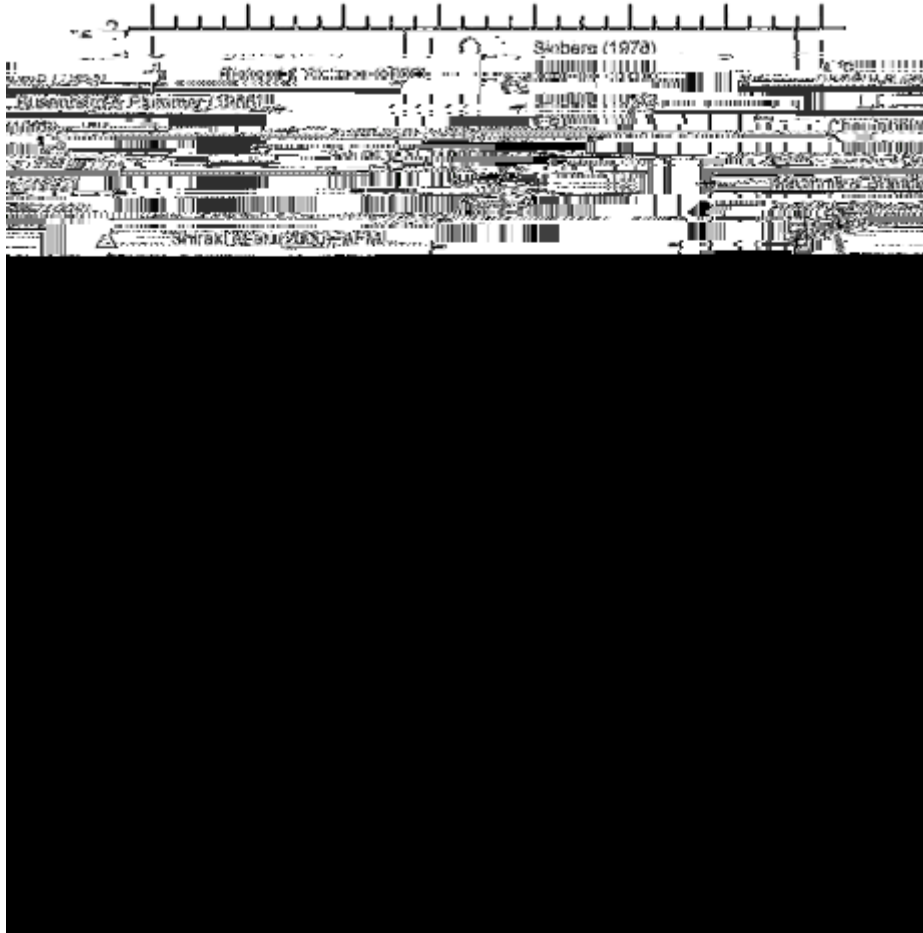
$\text{HCO}_3$

pH

Marini

pH

pH



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L. Marini : Geological Sequestration of Carbon Dioxide: Thermodynamics, Kinetics, and Reaction Path Modeling, Elsevier, p.453, 2007

pH

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[H<sup>+</sup>]

H<sup>+</sup>

2

3.5

5.5

pH

P<sub>CO2</sub>

Richard and Sjoberg, 1983

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5.5

pH

CO<sub>2</sub>

$$R_k = \frac{A}{V} \left( \frac{m}{m_0} \right)^n$$

(2.4-13)

$R_k$

(mol/m<sup>2</sup>/s) A

(m<sup>2</sup>) V

(kgw) m<sub>0</sub>

, m

(m/ m<sub>0</sub>)<sup>n</sup>

A/V



N2

Kr

-196

BET

## 2.4

- 1 C.A.J. Appelo and D. Postma Geochemistry, groundwater and pollution by p.175 2005
- 2) D. L. Parkhurst and C.A.J. Appelo1 : USER'S GUIDE TO PHREEQC (VERSION 2)—A COMPUTER PROGRAM FOR SPECIATION, BATCH-REACTION, ONE-DIMENSIONAL TRANSPORT, AND INVERSE GEOCHEMICAL CALCULATIONS, Water-Resources Investigations Report 99-4259, pp.43-44, 1999
- 3) L. Marini : Geological Sequestration of Carbon Dioxide: Thermodynamics, Kinetics, and Reaction Path Modeling, Elsevier, p.453, 2007



&") : 7C<sub>8</sub>

CO<sub>2</sub>



7C<sub>&</sub>





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90 p.101-115 1984

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16	5	1	pp.145
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17)	5	1	pp.49
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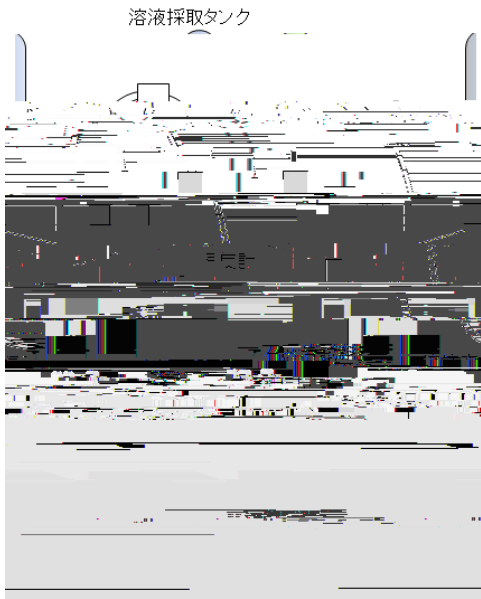
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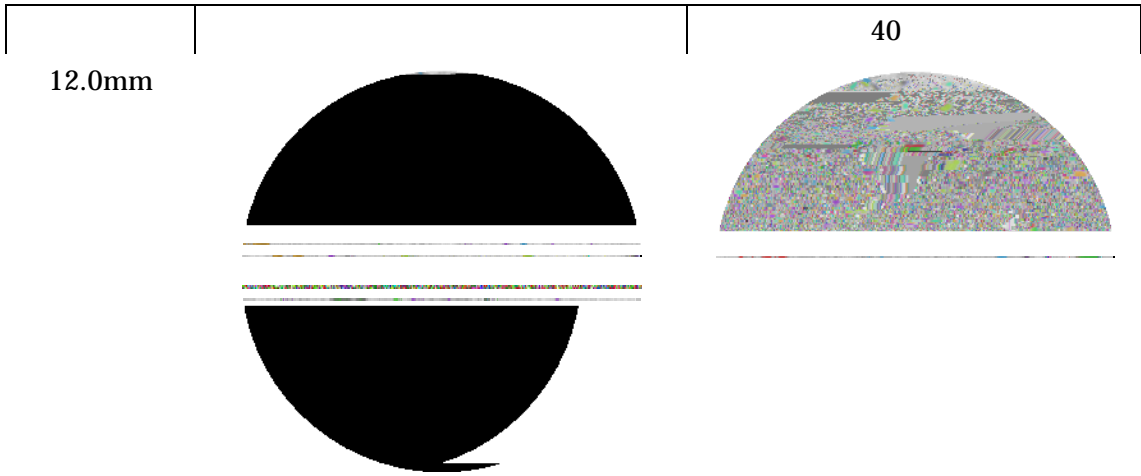
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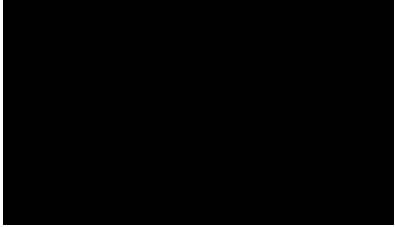




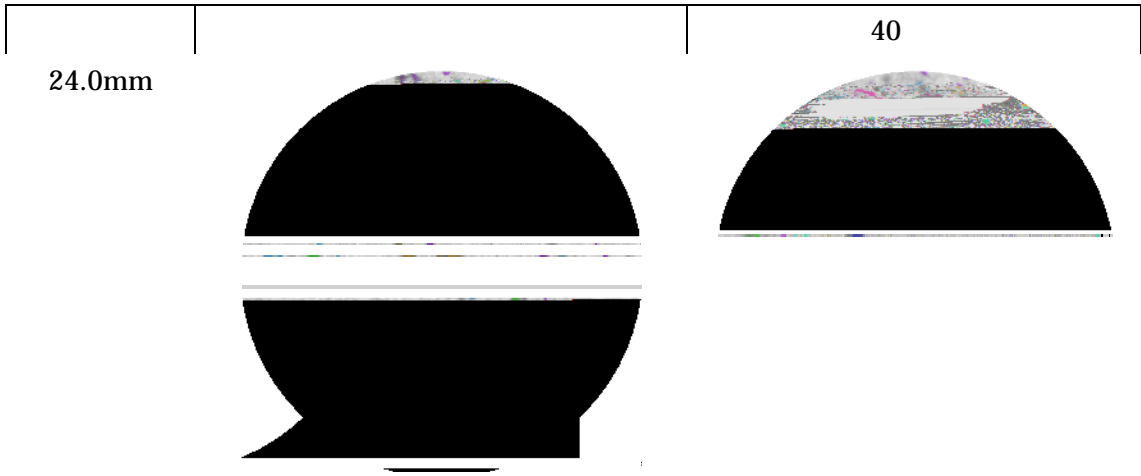
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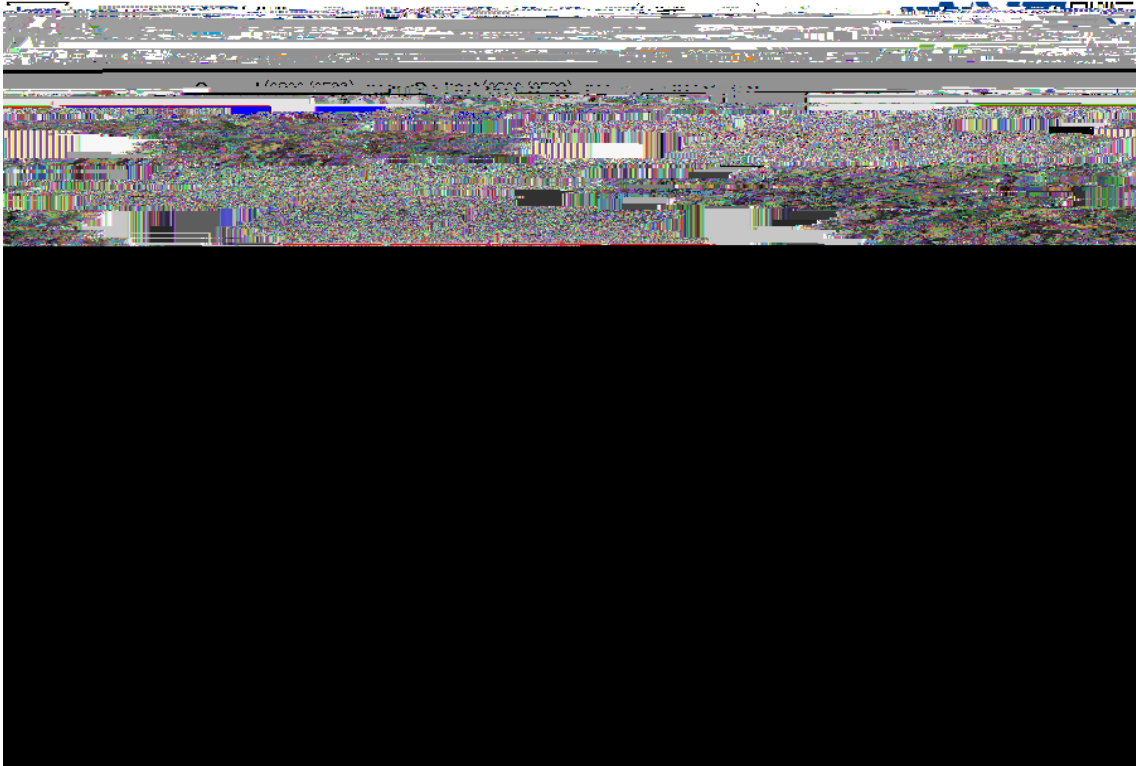






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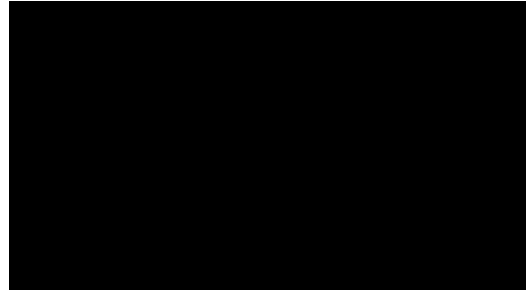
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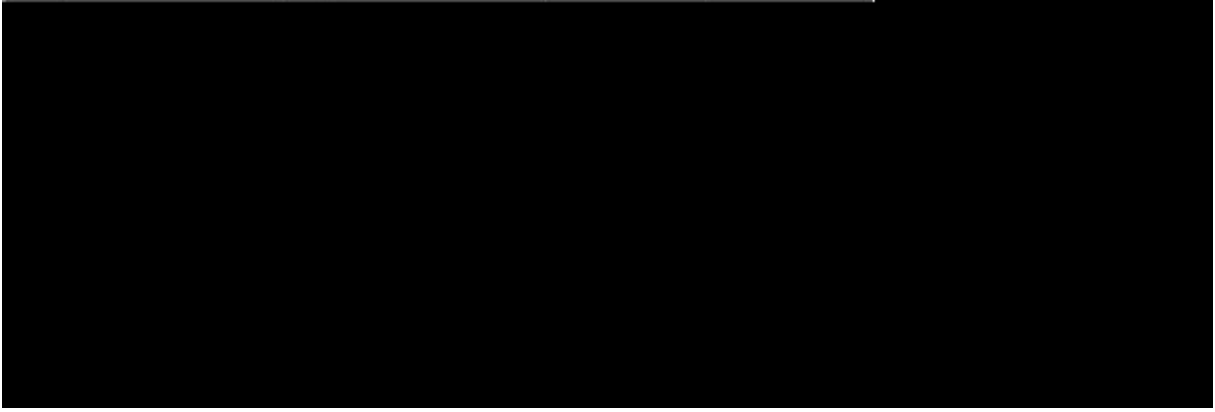
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pp. 19-22, 2008

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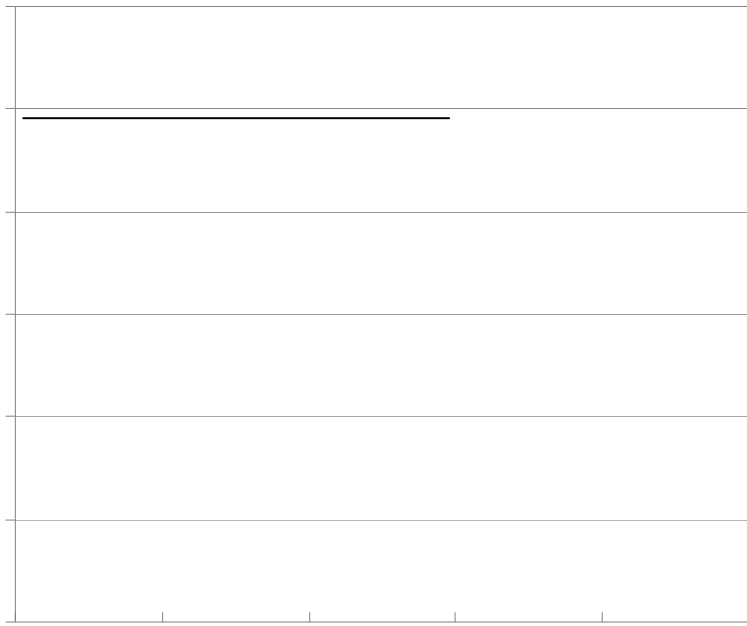
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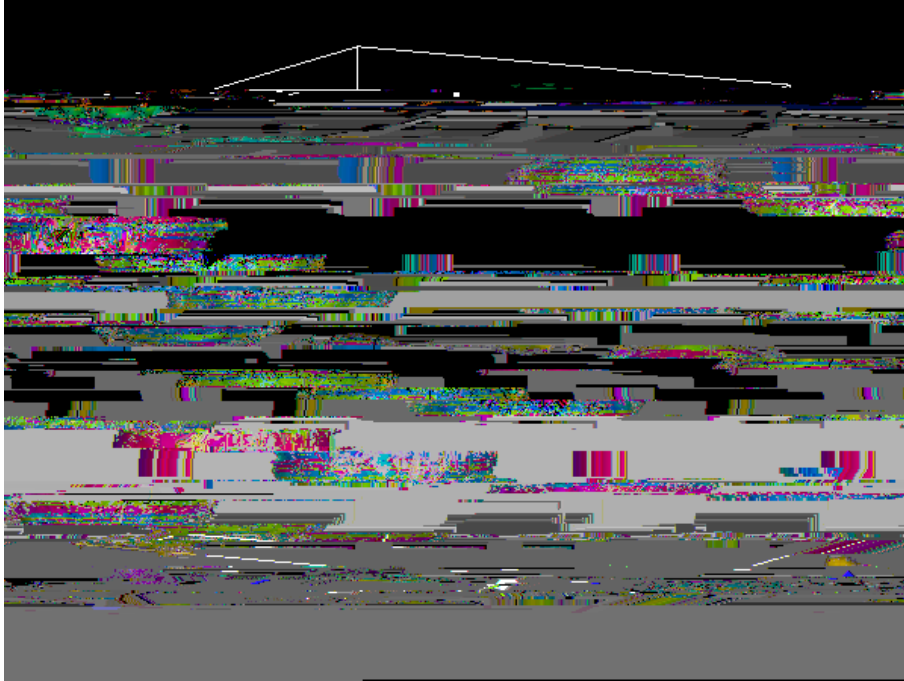


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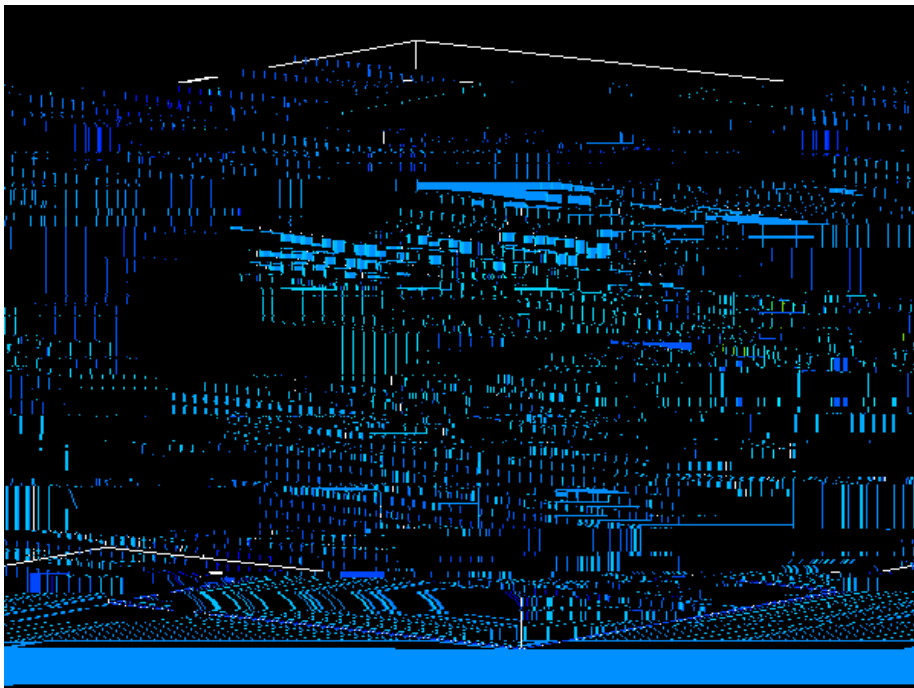
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- 1) Inamuro T. : Lattice Boltzmann methods for viscous fluid flows and for two-phase fluid flows, Fluid Dyn. Res., 38(2006), pp.641-659

- 2) Kataoka Y. and Inamuro T. : Numerical simulations of the behavior of a drop in a square pipe flow using the two-phase lattice Boltzmann method, *Phil. Trans. R. Soc. A*, 369 (2011),











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