

## Supporting information

### Insight into the ADOR zeolite-to-zeolite transformation: UOV case

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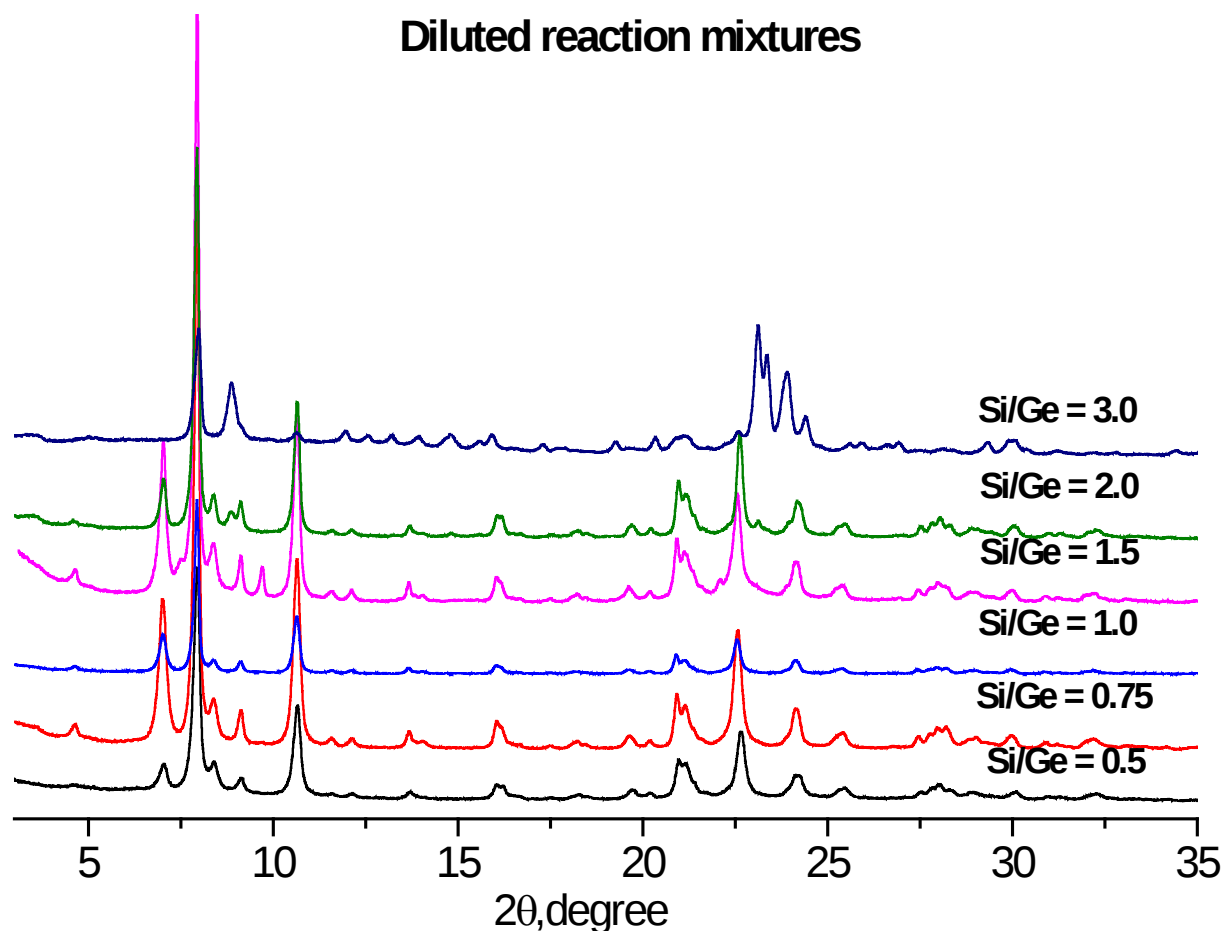


Figure SI-1. XRD patterns of UOV-n zeolite samples obtained from diluted reaction mixtures with Si/Ge = 0.5 – 3.0.

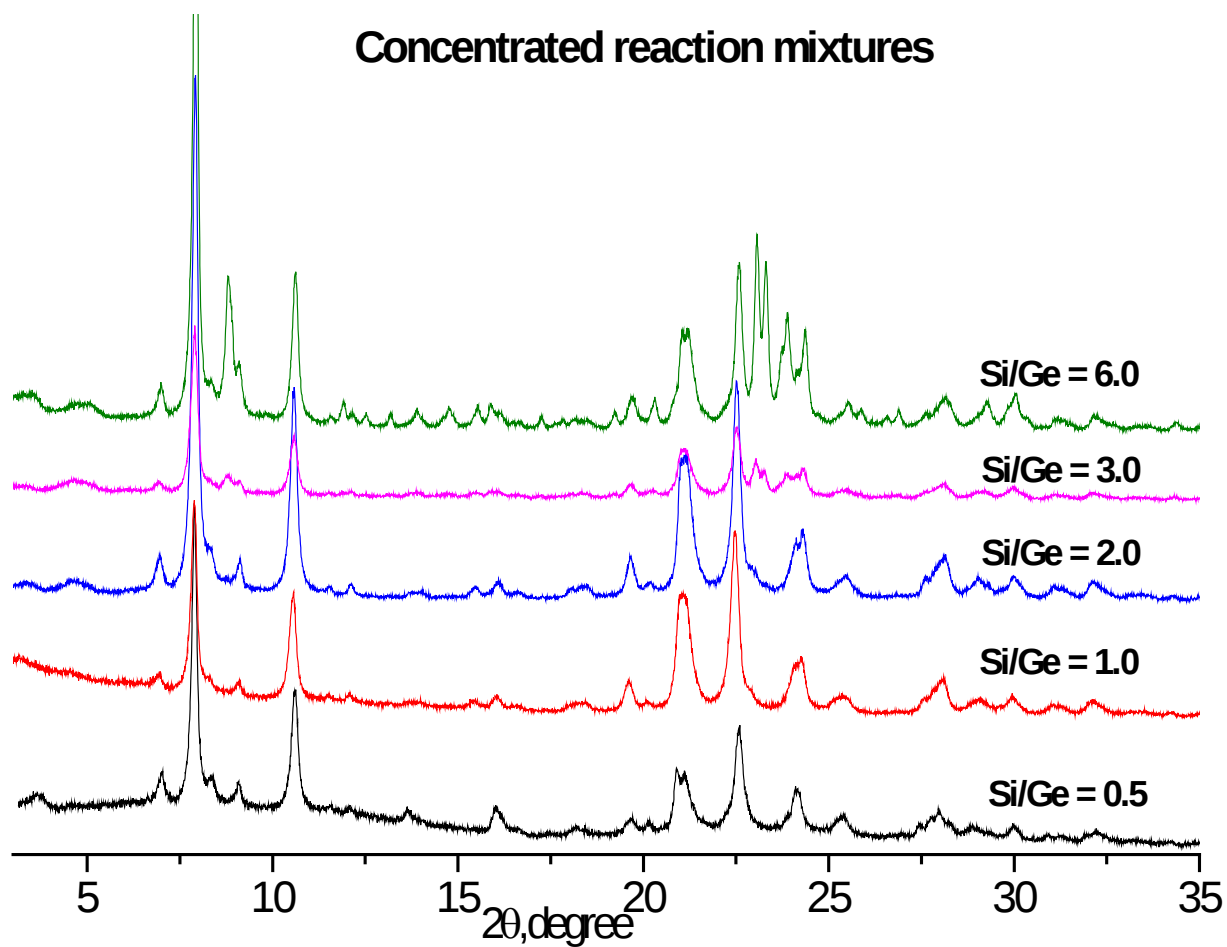


Figure SI-2. XRD patterns of UOV zeolite samples obtained from concentrated reaction mixtures with Si/Ge = 0.5-6.0.

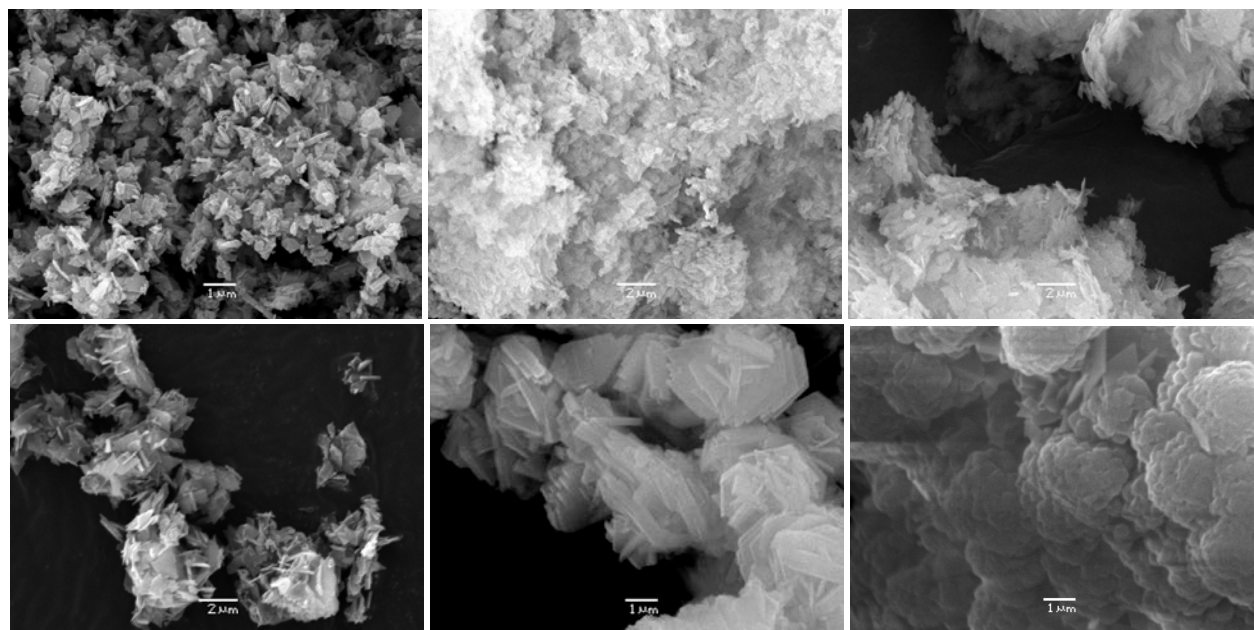


Figure SI-3. SEM images of UOV zeolite samples obtained from diluted reaction mixtures. Top: (from left to right) UOV-0.5, UOV-0.75, UOV-1. Bottom: (from left to right), UOV-1.5, UOV-2, UOV-3.

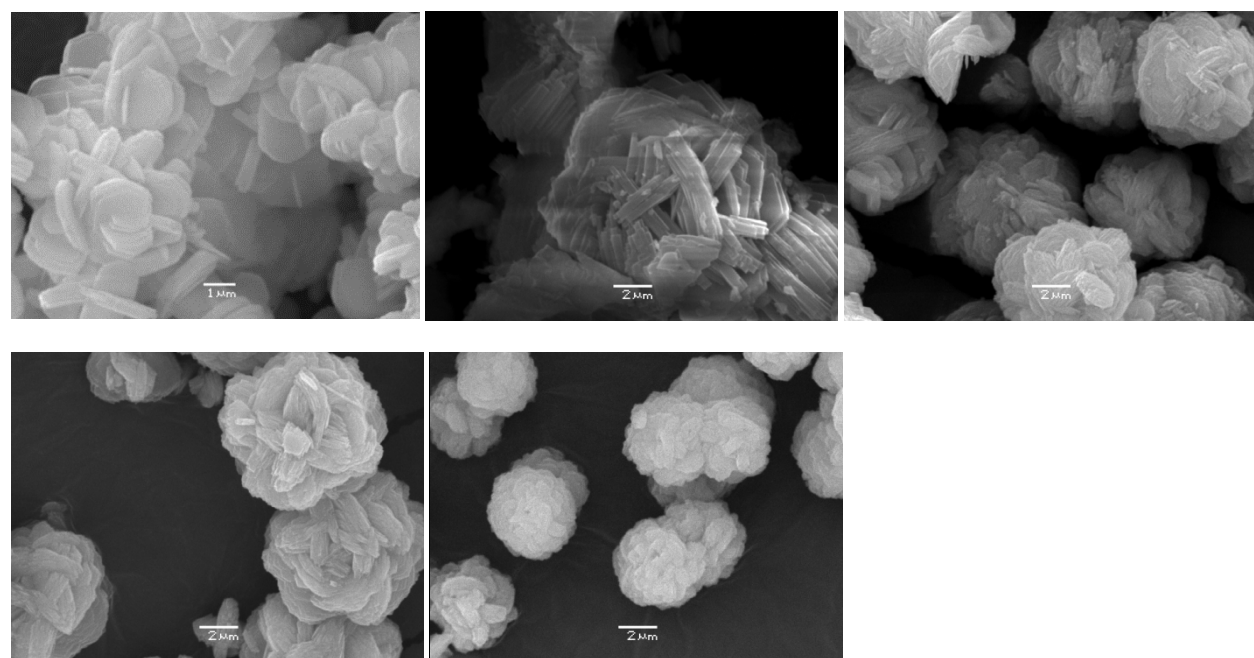


Figure SI-4. SEM images of UOV zeolite samples obtained from concentrated reaction mixtures. Top: (from left to right) UOV-0.5-c, UOV-1-c, UOV-2-c. Bottom: (from left to right), UOV-3-c, UOV-6-c.

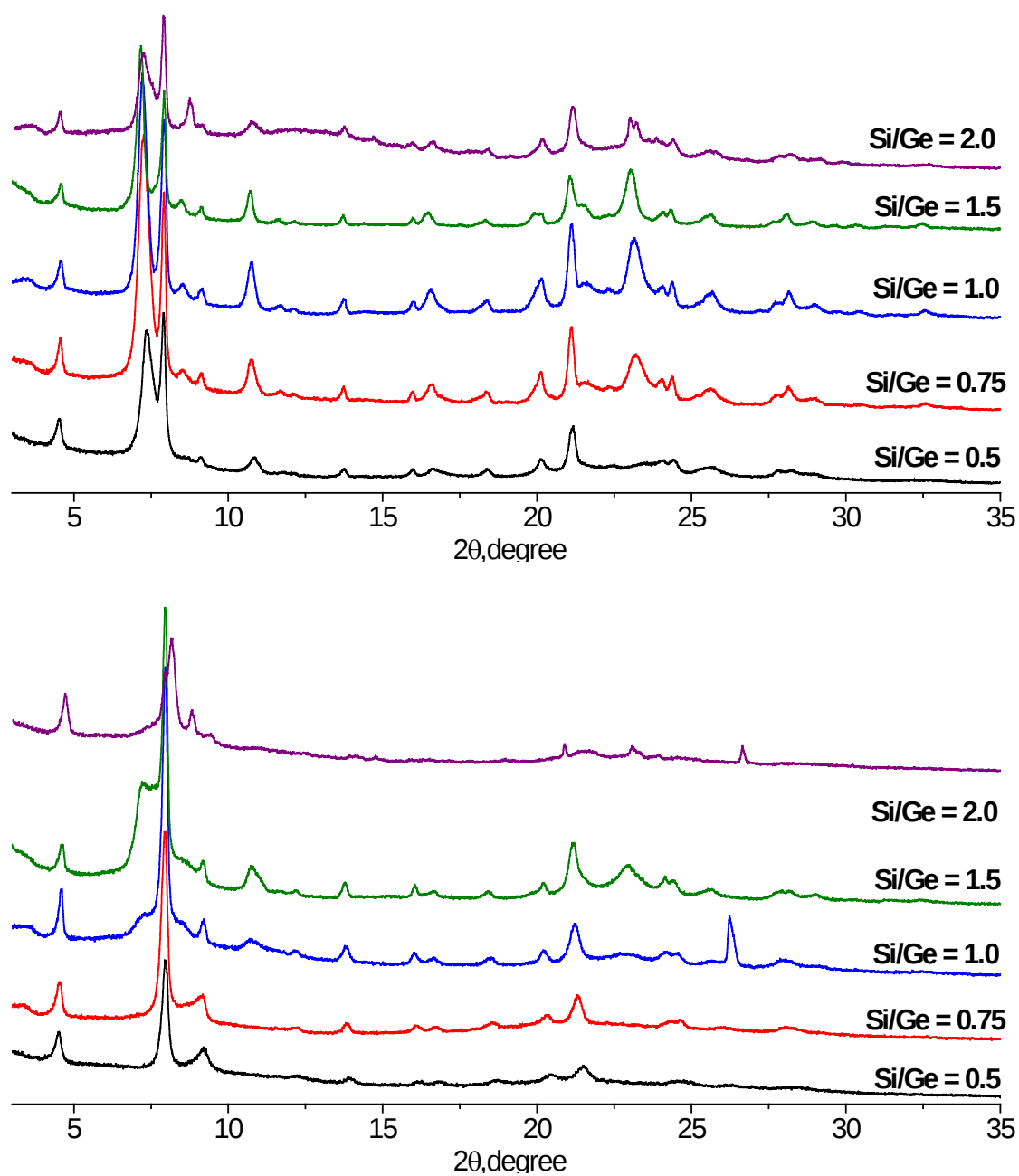


Figure SI-5. XRD patterns of UOV-x samples hydrolyzed with 0.1M HCl (top) and subsequently calcined (bottom).

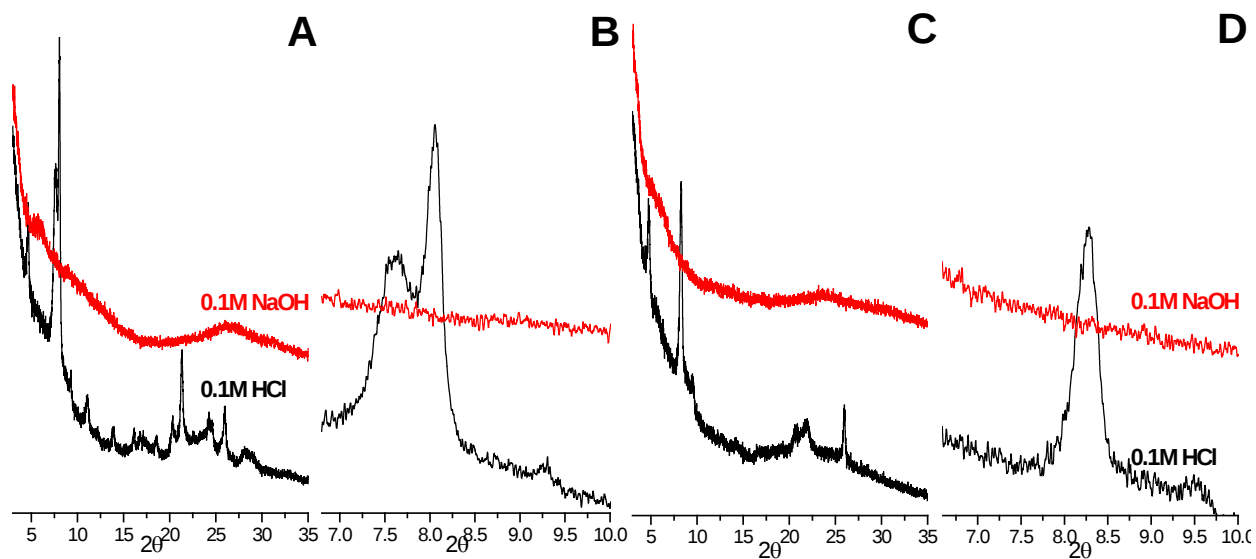


Figure SI-6. XRD patterns of UOV-0.5 treated with 0.1M HCl (black) and 0.1M NaOH (red) at 25 °C for 16h A) before, and C) after calcination; B) and D) respective small-angle region.

**Table SI-1.** Decrease in the interlayer d-spacing ( $\Delta D$ ) for UOV-n samples, treated under different conditions

| Sample   | Conditions of the treatment                      | $2\theta$ , 100 | $\Delta 2\theta$ , 100 | $\Delta D$ , Å |
|----------|--------------------------------------------------|-----------------|------------------------|----------------|
| UOV-0.5  | 0.1M HCl, 25°C, 24h                              | 7.35            | 0.39                   | 0.67           |
| UOV-0.75 | 0.1M HCl, 25°C, 24h                              | 7.26            | 0.30                   | 0.52           |
| UOV-1    | 0.1M HCl, 25°C, 24h                              | 7.23            | 0.27                   | 0.47           |
| UOV-1.5  | 0.1M HCl, 25°C, 24h                              | 7.16            | 0.20                   | 0.35           |
| UOV-2    | 0.1M HCl, 25°C, 24h                              | 7.24            | 0.28                   | 0.49           |
| UOV-0.5  | 0.1M HCl, 25°C, 16h                              | 7.35            | 0.39                   | 0.67           |
|          | 0.1M HNO <sub>3</sub> , 25°C, 16h                | 7.35            | 0.39                   | 0.67           |
|          | 0.146M Cl <sub>3</sub> COOH, 25°C, 16h           | 7.27            | 0.31                   | 0.54           |
|          | 1.4M H <sub>3</sub> PO <sub>4</sub> , 25°C, 16h  | 7.23            | 0.27                   | 0.47           |
|          | 0.09M H <sub>2</sub> SO <sub>4</sub> , 25°C, 16h | 7.19            | 0.23                   | 0.40           |
| UOV-0.5  | 0.1M HCl, 25°C, 3h                               | 7.25            | 0.29                   | 0.51           |
|          | 0.1M HCl, 105°C, 3h                              | 7.10            | 0.14                   | 0.25           |
|          | 0.1M HCl, 145°C, 3h                              | 7.05            | 0.09                   | 0.16           |

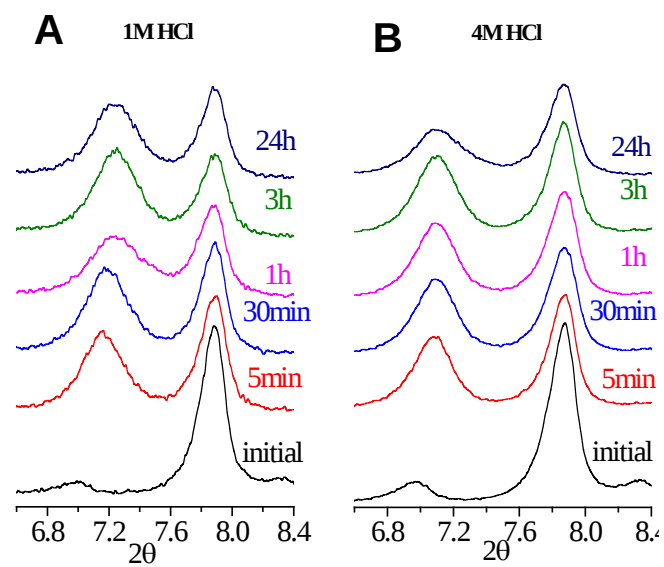
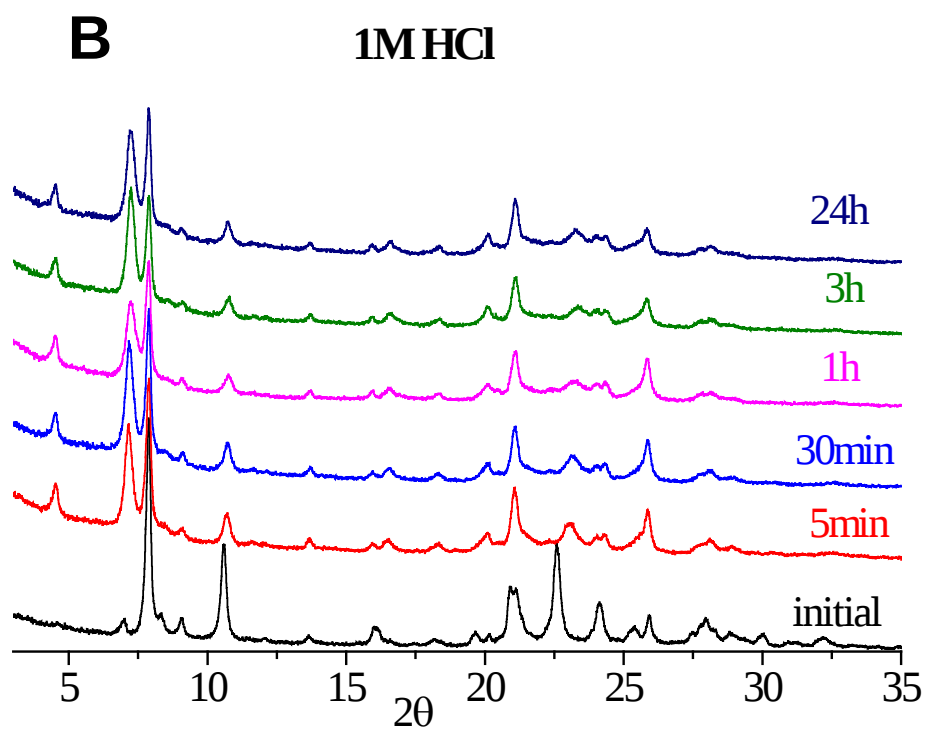
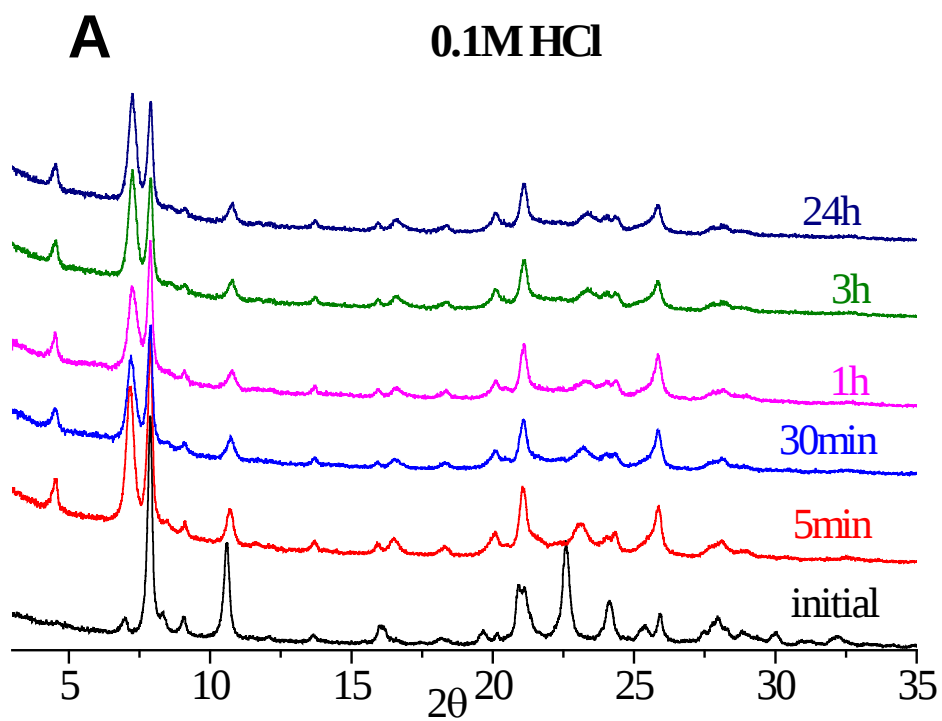


Figure SI-7. Small angle region of XRD patterns of UOV-0.5 sample treated with A) 1M HCl, B) 4M HCl.



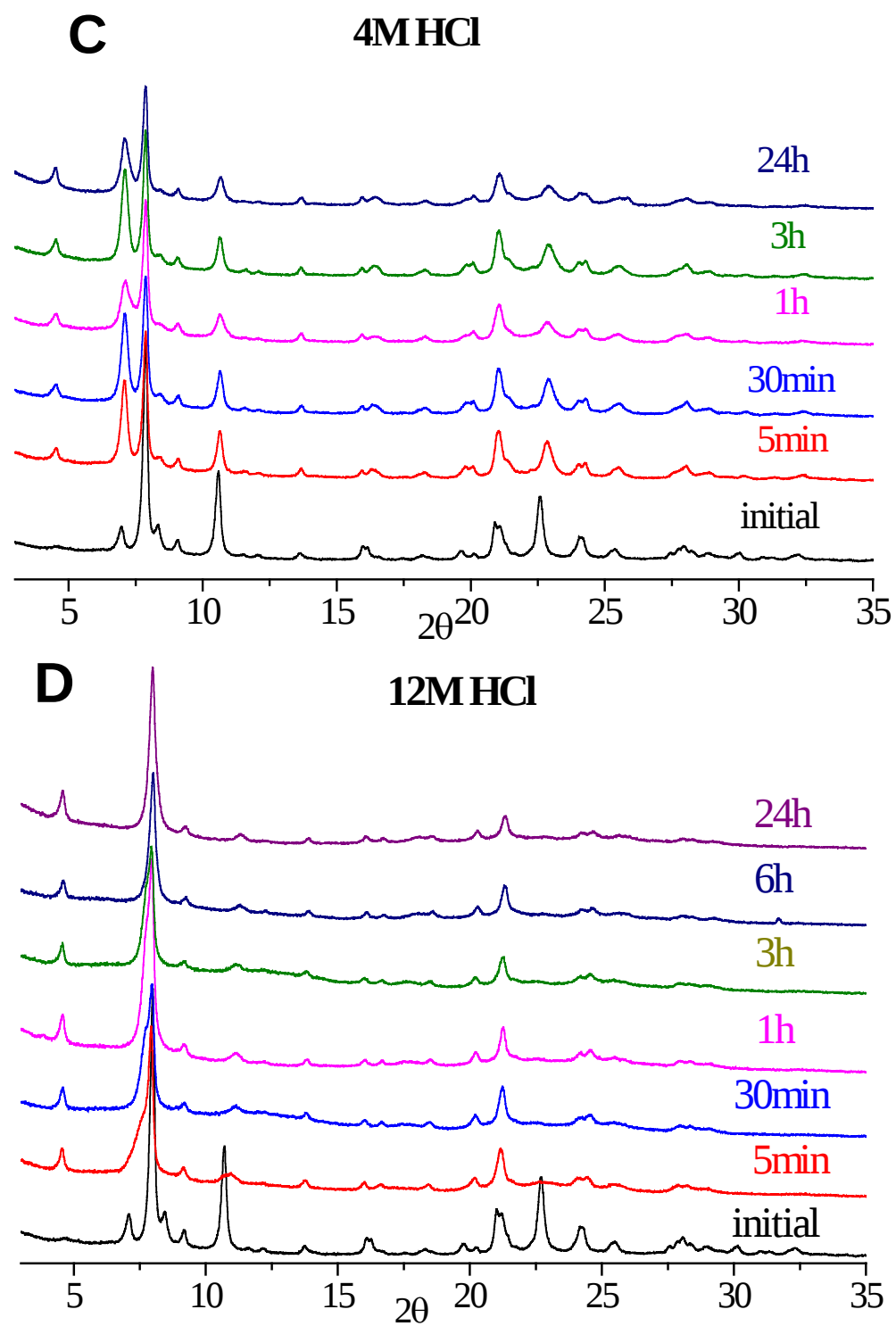


Figure SI-8. XRD patterns of UOV-0.5 sample treated with A) 0.1 M, B) 1 M, C) 4 M and D) 12 M HCl.