BAB V
KESIMPULAN DAN SARAN

5.1 Kesimpulan

Dari hasil penelitian ini, dapat disimpulkan :

1. *Pre-treatment* mikroalga dengan sonikasi dapat meningkatkan perolehan *hydrochar* pada proses karbonisasi hidrotermal.
2. *Dopant* melamin memberikan perolehan *hydrochar* yang lebih tinggi dibandingkan *dopant* urea, sedangkan *dopant* urea memberikan perolehan *N-doped carbon* yang lebih tinggi dibandingkan *dopant* melamin.
3. *Dopant* urea menghasilkan *N-doped carbon* dengan komposisi nitrogen yang lebih tinggi dan kristalinitas yang lebih tinggi dibandingkan *N-doped carbon* yang dihasilkan dari *dopant* melamin, serta kedua *dopant* tidak memberikan pengaruh signifikan terhadap morfologi *N-doped carbon.*
4. CV-U2-K yang menggunakan aktivator K_2CO_3 dan *dopant* urea memberikan komposisi nitrogen, dan kristalinitas yang paling tinggi, serta kedua aktivator dan *dopant* tidak memberikan pengaruh signifikan terhadap morfologi *N-doped carbon* yang diperoleh.

5.2 Saran

Berdasarkan penelitian ini, saran yang dapat diberikan untuk peneliti selanjutnya dengan topik yang sama adalah sebagai berikut :

1. Menambahkan analisis XPS (*X-ray Photoelectron Spectroscopy*).
2. Menggunakan sumber nitrogen lain seperti amonium nitrat.

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