```python
In [6]:    import numpy as np
           import matplotlib.pyplot as plt

In [34]:   %matplotlib inline
           def gradient_descent(x,y):
               m_curr = b_curr = 0
               rate = 0.01
               n = len(x)
               plt.scatter(x,y,color='red',marker='+',linewidth='5')
               for i in range(1000):
                   y_predicted = m_curr * x + b_curr
           #         print (m_curr,b_curr, i)
                   plt.plot(x,y_predicted,color='green')
                   md = -(2/n)*sum(x*(y-y_predicted))
                   yd = -(2/n)*sum(y-y_predicted)
                   m_curr = m_curr - rate * md
                   b_curr = b_curr - rate * yd

In [35]:   x = np.array([1,2,3,4,5])
           y = np.array([5,7,9,11,13])

In [36]:   gradient_descent(x,y)
```