

```
% Constant
e = 1.6 * 10^-19;
c = 3*10^8;
```

```
% Change Data here
lamda = [365 405 436 546 577];
lamda = lamda .* 10^-9;
v = c ./ lamda;
Ua = [1.74 1.41 1.16 0.72 0.56];

% lx
% 577nm
l = [1 0.75 0.5 0.25];
```

```
l = 1x4
           1           0.75           0.5 ...
```

```
Ua1 = [30.60 26.22 17.38 9.02];
```

```
Ua1 = 1x4
           30.6           26.22           17.38 ...
```

```
% lets do the fit
v = v';
```

```
v = 5x1
      821917808219178
      740740740740741
      688073394495413
      549450549450549
      519930675909879
```

```
Ua = Ua';
```

```
Ua = 5x1
           1.74
           1.41
           1.16
           0.72
           0.56
```

```
ftpx = fittype('poly1');
```

```
ftpx =
    Linear model Poly1:
    ftx(p1,p2,x) = p1*x + p2
```

```
fx = fit(v, Ua, ftx);
```

Warning: Equation is badly conditioned. Remove repeated data points or try centering and scaling.

```

fx =
Linear model Poly1:
fx(x) = p1*x + p2
Coefficients (with 95% confidence bounds):
p1 = 3.793e-15 (3.315e-15, 4.271e-15)
p2 = -1.401 (-1.723, -1.078)

```

```

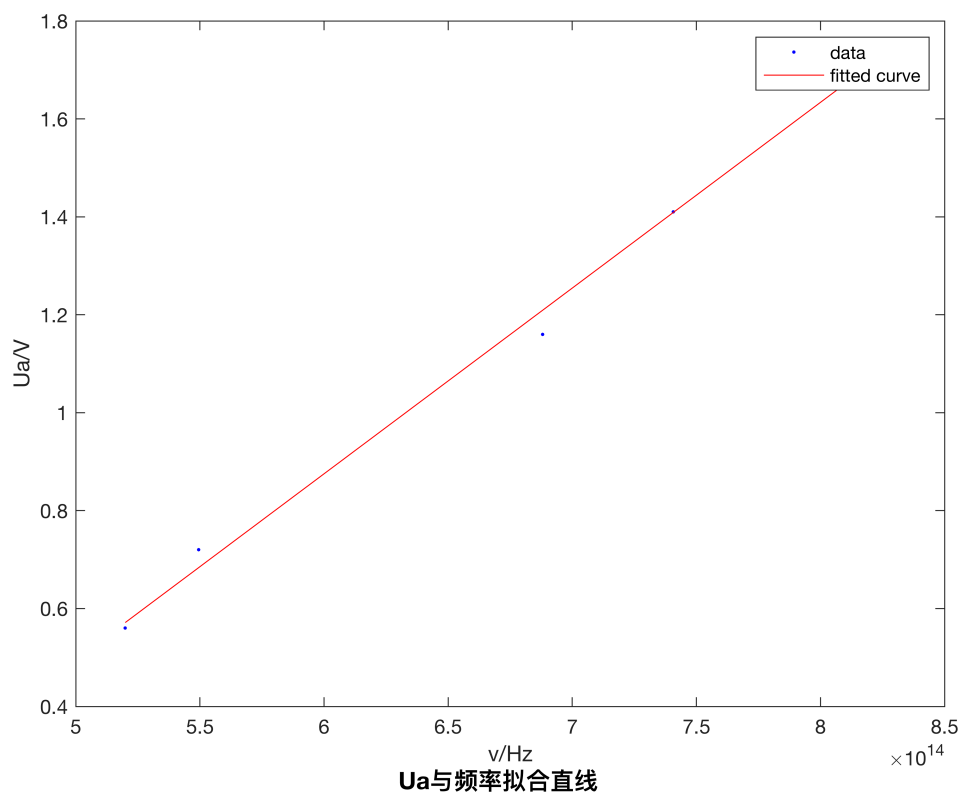
l = l';
Ual = Ual';
fxl = fit(l, Ual, ftpx);

```

```

% Plot
plot(fx, v, Ua)
text(6.3*10^14, 0.25, 'Ua与频率拟合直线', 'FontWeight','bold', 'FontSize',12)
ylabel('Ua/V')
xlabel('v/Hz')

```



```
h = fx.p1 * e
```

```

h =
6.06886046652697e-34

```

```

plot(fxl, l, Ual)
text(0.5, 1.5, 'Ua与透光率拟合直线 ', 'FontWeight','bold', 'FontSize',12)
xlabel('透光率')

```

```
ylabel('Ua/V')
```

