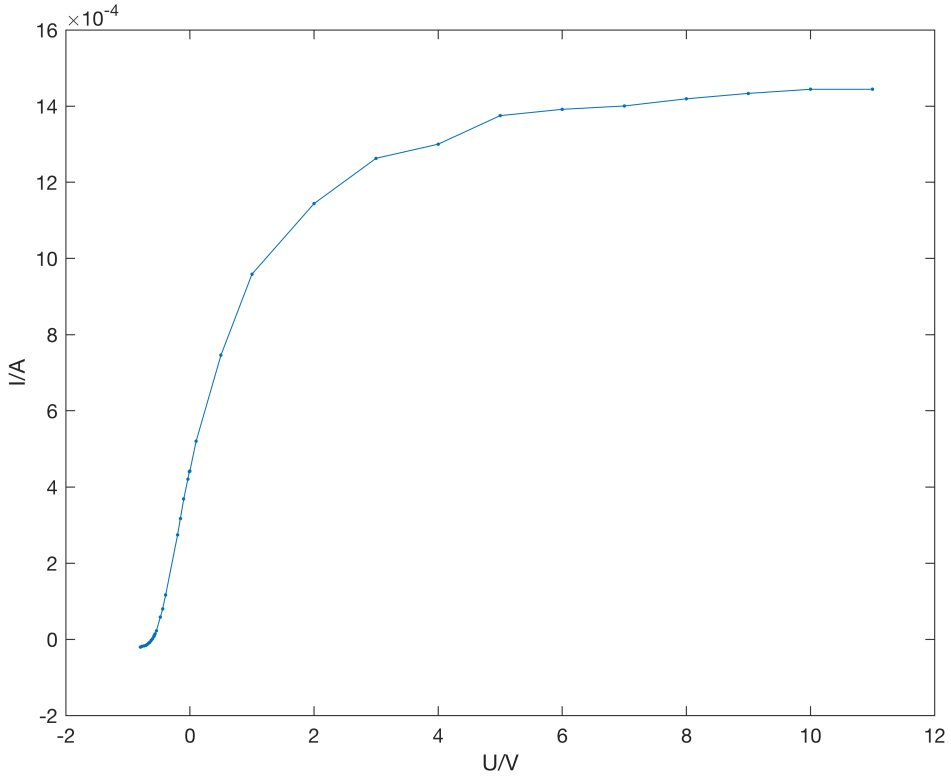
```
% Constant
e = 1.6 * 10^-19;
```

```
% Pre-defined var
precut_start = 1;
precut_end = 5;

aftercut_start = 8;
aftercut_end = 29;
```

```
% Data saved here
lamda = 546;
U = [-0.7985 -0.7828 -0.7731 -0.7407 -0.71 -0.6912 -0.6673 -0.6524 -0.6450 -0.6237 ...
    -0.6047 -0.5833 -0.5768 -0.5735 -0.5615 -0.5404 -0.4758 -0.4392 -0.3912 -0.1988 ..
    -0.1537 -0.0996 -0.0328 -0.0102 0 0.1 0.5 1 2 3 4 4.9986 5.9989 6.9994 7.9993 ...
    8.9994 9.9991 10.9993];
V = [-1.01 -0.96 -0.94 -0.87 -0.80 -0.69 -0.53 -0.42 -0.35 -0.14 0.05 0.36 0.47 0.50 0
    1.12 2.92 4.00 5.82 13.70 15.85 18.43 21.02 22.00 22.11 26.00 37.30 47.94 57.20 63
    65.00 68.75 69.58 70.02 70.96 71.67 72.21 72.21];

% Check if match and calculate A
if(size(U) == size(V))
    A = V .* 10^-3 .* 200 .* 10^-4;
else
    error("U V not match");
end
```

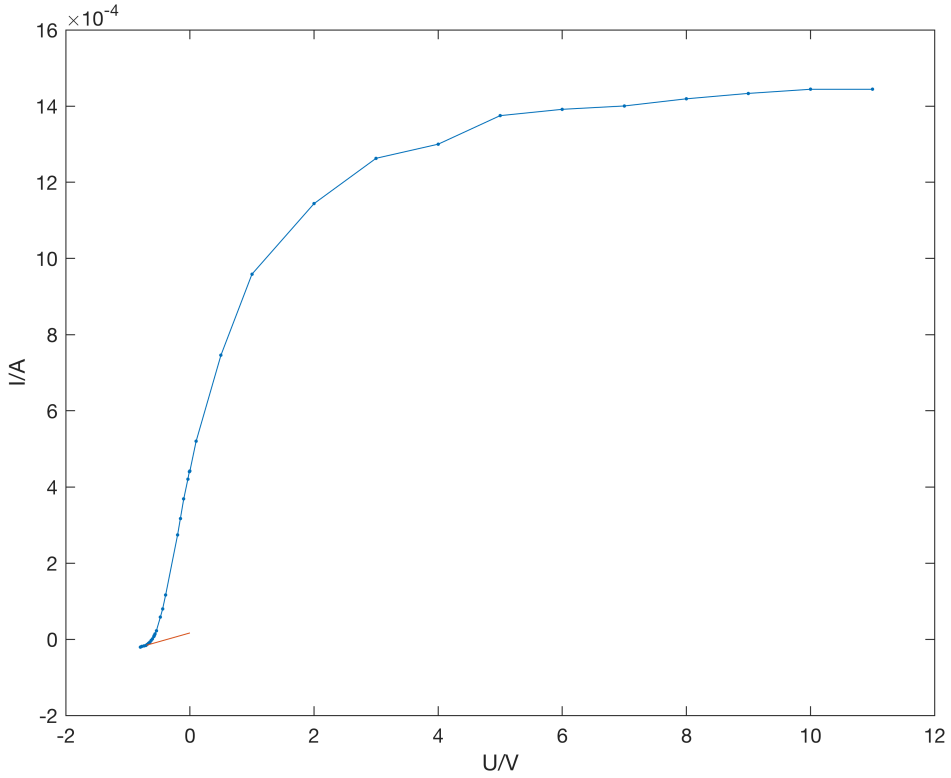
```
% Lets plot the first picture
figure;

plot(U, A, '.-');
axis on
hold on
xlabel('U/V')
ylabel('I/A')

% Create textbox
text(2, -4*10^-4, '546nm光下光电管的伏安特性曲线', 'FontWeight','bold', 'FontSize',12)
```



546nm光下光电管的伏安特性曲线

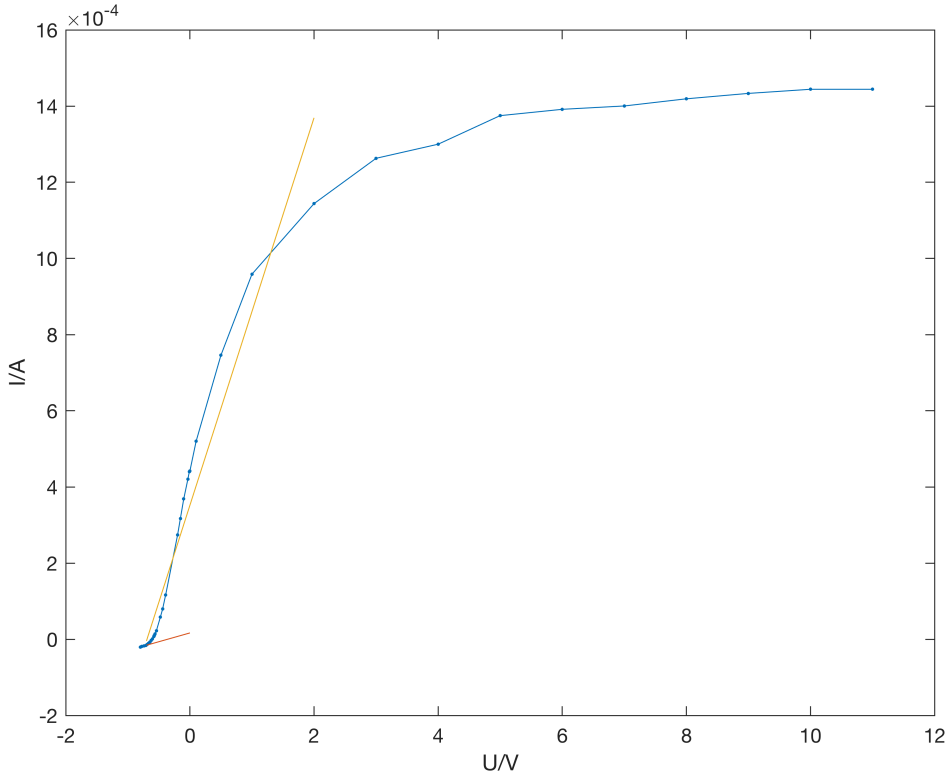
```
% Make a slice
U_Before = U(precut_start:precut_end)';
A_Before = A(precut_start:precut_end)';

U_After = U(aftercut_start:aftercut_end)';
A_After = A(aftercut_start:aftercut_end)';
```

```
% Fit before
ftp = fittype('poly1');
fittedPic = fit(U_Before, A_Before, ftp);
fitx_before = -0.7:0.005:0.0;
fity_before = fittedPic(fitx_before);
plot(fitx_before, fity_before );
```



546nm光下光电管的伏安特性曲线

```
% Fit After
fittedPicA = fit(U_After, A_After, ftp);
fitx_After = -0.7:0.005:2;
fity_After = fittedPicA(fitx_After);
oic = plot(fitx_After, fity_After);
```



546nm光下光电管的伏安特性曲线

```
% Solve the points
syms x
eq = (fittedPic.p1 - fittedPicA.p1)*x + fittedPic.p2 - fittedPicA.p2 == 0;
px = solve(eq, x);
px = eval(px)
```

```
px =

        -0.724711060348896
```