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APÉNDICE

Código de los programas de Arduino UNO utilizados en los experimentos realizados en el presente estudio

A. Seguimiento del voltaje de celda

```
void setup() {
    pinMode(9,OUTPUT);
    TCCR1B = TCCR1B & B11111000 | B00000001;
    Serial.begin(9600);
    Serial.print("PWM");
    Serial.print(",");
    Serial.print("time(s)");
    Serial.print(",");
    Serial.print("Pin A0");
    Serial.print(",");
    Serial.println("Pin A1");
}
    void loop() {
    int pwm=1;
    int AT0;
    int AT1;
    analogWrite(9,pwm);
    for(int j=1;j<=625;j++){
            AT0=analogRead(A0);
            AT1=analogRead(A1);
            Serial.print(pwm);
            Serial.print(",");
            Serial.print(millis()/1000.00,2);
            Serial.print(",");
            Serial.print(AT0);
            Serial.print(",");
            Serial.println(AT1);
            delay(96);
    }
    analogWrite(9,LOW);
    Serial.flush();
    while(1);
    }
```

B. Seguimiento de la velocidad de barrido

```
void setup() {
    pinMode(9,OUTPUT);
    TCCR1B = TCCR1B & B11111000 | B00000001;
    Serial.begin(9600);
    Serial.print("PWM");
    Serial.print(",");
    Serial.print("time(s)");
    Serial.print(",");
    Serial.print("Pin A0");
    Serial.print(",");
    Serial.println("Pin A1");
    }
    void loop() {
    int n=1;
    int ciclos=5;
    int AT0;
    int AT1;
    while(n<=ciclos){
            Serial.print("ciclo");
            Serial.print(" ");
            Serial.println(n);
            for(int i=24;i<227;i++){
                    analogWrite(9,i);
                    for(int j=1;j<=30;j++){
                            AT0=analogRead(A0);
                            AT1=analogRead(A1);
                            delay(14.07); // Colocar aquí
Retardo por Dato (TDato)
                    }
            }
            for(int i=227;i>24;i--){
                    analogWrite(9,i);
                    for(int j=1;j<=30;j++){
                            AT0=analogRead(A0);
                            AT1=analogRead(A1);
                            delay(14.07); // Colocar aquí
Retardo por Dato (TDato)
                    }
            }
            n=n+1;
```

```
    }
    analogWrite(9,LOW);
    Serial.flush();
    while(1);
    }
```

C. Medición de corriente de celda

```
void setup() {
    pinMode(9,OUTPUT);
    TCCR1B = TCCR1B & B11111000 | B00000001;
    Serial.begin(9600);
    Serial.print("PWM");
    Serial.print(",");
    Serial.print("A0");
    Serial.print(",");
    Serial.println("A1");
    }
    void loop() {
    int AT0;
    int AT1;
    for(int i=0;i<=255;i=i+17){
            analogWrite(9,i);
            for(int j=1;j<=60;j++){
                    AT0=analogRead(A0);
                    AT1=analogRead(A1);
                    Serial.print(i);
                    Serial.print(",");
                    Serial.print(AT0);
                    Serial.print(",");
                    Serial.println(AT1);
                    delay(100);
            }
    }
    analogWrite(9,LOW);
    Serial.flush();
    while(1);
}
```